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The Habitations of Man in all Ages.

AFTER years spent in the accumulation and arrangement of facts of architectural design, construction, and history, the author of the "Dictionnaire Raisonnée" seems to be turning his thoughts from details to wider generalisations, and quitting the path of literal and statistical teaching for one in which fancy and theory are allowed more play. We have noticed how happily this has been done in the two works giving the history of a fortress and of the building of a modern house. In those two brilliantly-written volumes, however, the information was historical and practical, the exercise of fancy lay only in the manner in which the information was conveyed to the reader. In M. Viollet-le-Duc's latest work of the kind, the English version of which * we owe to the same hand to which we were indebted for the translations of the two previous books referred to, the subject treated is wider and more theoretical in its bearing, and the matter as well as the manner is necessarily the production, to a considerable extent, of imagination and conjecture building upon a footing of historic record, sometimes full and complete, but at other times incomplete and insecure, and offering ground for deduction rather than positive statement.

The field occupied by the author in this comparatively small book is, in fact, very extended, being no less than a general survey of the history of domestic architecture,—of the building regarded as a habitation. Of course there is no attempt to treat the subject in detail, which, even with the imperfect data to go on in many cases, would require a dozen volumes rather than one. The aim of the book is to present a kind of bird's-eye view of the principal forms which the dwelling-house assumed among different races and in different ages; to trace their connexion with the habits and *locale* amid which they arose; the continuity of idea which is shown sometimes by the buildings of the same race for many ages, though with changes in detail; the extent to which one form of habitation is borrowed from that of other races; to give, in short, a general idea of the historic and theoretic relations of the whole development of domestic architecture. The subject, however, does not afford either the continuity or the unity of place which enabled the author to treat the subjects of the Fortress and the Modern House in the form of an historical sketch and a novelette. To get over this difficulty, and to give connexion and dramatic unity to the whole, he invents two personages who have the same perpetuity of existence, and habit of turning up unexpectedly every two or three centuries, which characterised the more celebrated "Wandering Jew." These two personages, named Epergos and Doxius, represent, according to the translator's preface, "the spirit of progress and that of obstinate adherence to traditional forms and habits." They do represent this, in their respective way of looking at things; but we take it, judging from the meaning implied in their names,* as well as from their expressed sentiments, that there is more intended than this; that Epergos is the practical man who studies a subject from data before him and looks to its practical application, while Doxius is the theorist, the dreamer, who cannot trouble himself about the stern logic of facts. In this view of the matter is implied a bit of satire which the translator seems to miss: the author evidently inferring that it is the theorist, the dealer in precedents (whom he has already satirised as "the critic" in the *Histoire d'une Maison*), who is in everybody's way, and is always the stumbling-block in the path of progress.

The scene rises upon a primeval landscape of rapine and contention among furious beasts, which Doxius thinks quite satisfactory, and evidently what was intended to be the normal state of things; but Epergos, the "vain and restless spirit," as his companion terms him, is attracted by the doings of some beings who seem to have something like a system of co-operation, and are not moved by such mere blind impulse as the rest of the animals. "Are they men?" is the question to be answered in the next chapter, where Epergos and Doxius mingle with them, and find them shivering and endeavouring to shelter themselves under the lee of some large trees in a tempest of rain and wind. Epergos, moved by compassion, selects two young trees a few paces apart, and contrives to bend their two tops together, and tie them with rushes. He then shows the benighted beings how to continue the hint thus started, by getting other similar trees, fixing them in a circle with their tops together, and filling up the spaces with rushes, branches, and long grass, interlaced, and thus the first house is made, to the disgust of Doxius, who thinks his companion might as well be for teaching the birds how to improve their nests, or the beavers a new method of building. But, answers Epergos,—

"'Let us return here in a hundred thousand days, and we shall see whether these creatures have forgotten my instructions, and live as they were living yesterday. If so, then I am wrong in meddling with their affairs, and I have not found what I have been seeking; but if they have profited by my suggestions,—if the huts we see then are better made than these,—I have been successful, for in that case these creatures are not mere animals.'

'Belly,' returns Doxius; 'what can they be then?'

'How can I tell?'"

So the question is unanswered until it is seen whether the race can improve on their original type of habitation.

At the next Avatar, as we may term it, of Epergos and Doxius, they find the Aryans living in regularly constructed log-built houses, with a projecting roof in front for shelter, and a little railed-off enclosure before the entrance; two sheds or outbuildings adjoin it, one for forage and the other for cattle. The house is against a rock which shelters it, and on the side of the interior next the rock a fire burns brightly, and the smoke finds its way through a chimney built up against the rock. This is the typical Aryan dwelling, in its rudest form. But the typical dwelling is carried away in a heavy storm, and it is the work of Epergos to improve upon it in rebuilding, to employ stones piled on each other instead of logs, to divide the plan into two or three chambers for greater comfort; and especially to persuade the intending inmates that it is no use trying to put up a building in too great a hurry, if they want it to be lasting. In its new form the Aryan house shows the main points of the model to which the Aryan has ever since been addicted. This is summed up in the concluding chapter (p. 389).

"Observe how ineffaceable is this influence of race. Look at the English *cottage* *; we have still the Arya's house, not only in construction, but arrangement. There you invariably see the living-room (hall) where the family assemble, — the parlour, — reception-room, — place of assembly; and next, that separation of the domestic life from the public life; the *gynæceum* of the Greeks and the *nursery* of the English is pretty much the same place, for the gynæceum must not be confounded with the harem; the one is the *sanctum* of the family, the other a sort of aviary shut in from the gaze of strangers. Go to Sweden or Denmark and you will find in the private houses those arrangements which date from the primitive times of the Aryan race,—the hall, and the place reserved for the life of the family; a place inviolable. Your old French *châteaux* exhibited the same arrangement before Gallo Roman influences predominated over the Indo-Germanic; *i.e.*, derived from what we call the Franks. In its structure the true English villa is still the timber house of the Arya, and even when built of stone the forms are suggested by the timber structure. Similarly, if you go to Damascus, to Cairo, to Ispahan, as also in Algeria or Tunis, or even in Spain, you find one and the same plan adopted from a remote antiquity and adhered to down to the present day. The court, surrounded by porticos, the *patio* with its little chambers, and the upper room opening out of this patio, with its divans, and receiving only a borrowed light,—a cool and quiet place for the family gathering. Well, this very arrangement was to be found in a rudimentary form, and is still to be seen, in some almost deserted cities of Southern Syria."

We have quoted the whole paragraph, from a little address by Epergos to a party of con-

* "The Habitations of Man in all Ages." By Eugene Viollet-le-Duc. Translated by Benjamin Bucknall: with numerous illustrations. Sampson Low & Co. 1876.

* We do not know whether the mistake is that of the author or of the translator, but it is evident that the terminations of the two names should be the same; they are both Greek names, and as the Greek termination "os" is kept in the first name, it should have been retained in the other also: they should have either been "Epergos and Doxios," or "Epergus and Doxius."

* The translator rightly substitutes "villa," which is evidently the class of house Viollet-le-Duc is thinking of, for "cottage," which the French author has apparently used with an incorrect idea of its precise meaning.

temporary Frenchmen in the last chapter, in anticipation of some further remarks on the bulk of the book, as it illustrates one of the principal clues to the author's intention and general view of his subject, in insisting on the continuity of types in the domestic buildings of different races; and attention to this renders more intelligible the point of the short indications we shall have space to give as to his manner of further working out the subject.

In touching, in the chapter following that about the Aryan house, on "the yellow race," the author evidently considers the whole fabric of Chinese architecture as arising out of the abundance of bamboo-trees, which at once suggested the light and fragile-looking character of Chinese and other more or less similar architecture. We next meet with our friends the Aryas in a new site, and have sketches of their earliest habitations on the upper Indus. From a sketch of the method of supporting the roof, it appears that M. Viollet-le-Duc deduces the characteristic Indian bracket from the branching of a forked tree used as a story-post, one cross-beam resting between the forks, and the other, at right angles to it, being carried on the ends of the forks. The similarity of construction is, however, rather apparent than real; for it must be admitted that the bracket stands in a rather different relation to the upright, mechanically, from that of the fork-forming part of the upright itself. However, Epergos taught the Indo-Aryans some new refinements in building, particularly the utilising of the stores of timber in their country by making the upper part of their residences of timber overhanging the stone basement; and the sketch of this style of building (p. 60) gives the primitive type of a large class of buildings, afterwards, as one need not remind the reader, imitated even in rock-cut structures. Then follows an episode among the nomadic tribes of Central Asia, who had only wide, low tents to dwell in, supported by a number of stakes, and who at night decamped, carrying off with them the horses of the two investigators,—a kind of delicate suggestion that people who have not arrived at making any fixed habitations are likely to exhibit a very incomplete moral development. Among the "dwellings of the Egyptians" we find the pyramidal form suggested for the houses (this is long before the age of the great temples) by Epergos, because they would best resist the action of earthquakes, from which the inhabitants of the Delta suffered much. When, however, the circular form of plan was suggested also, as offering still less chance of a weak point to be shaken in by an earthquake, Epergos was met with unanswerable arguments against so heterodox a suggestion. "One of the most respected members of the assembly, rising, said,—'The dwelling of man should face the four points of the heavens; that is a sacred custom. It is becoming that such a structure should have a front and sides, which a circular building cannot possess. It should have its corners, and these corners ought to be square.' Epergos spoke without due consideration." This is not a bad sample of the kind of reasoning which often overrides the real practical requirements of the case in actual building. As to the theory here intended, of the origin of the Egyptian love of pyramidal buildings, it is, of course, pure critical conjecture,—probable enough if the Delta really was at any time in its history peculiarly subject to earthquakes; and as to the evidence of an intended symbolical meaning in the sloping sides, in the temple period, there are plenty of instances in history of subsequent symbolic meanings engrafted on forms or rites originally of purely practical origin.

Epergos, however, by no means approved of a people who built temples with massive stone columns, fashioned into reminiscences of bundles of reeds, merely because their first buildings had originated in this way. This was what he found them doing when he visited them again many centuries later; and this, and their general slow-going, looking-back character rather disgusted Epergos, and sent him away prematurely. We cannot follow him and his friend Doxius (who, by the way, seems to have been as insufferable a "prig" as a man could have for a companion) through all their various wanderings; but must confine ourselves to mentioning some of the critical and theoretical points which arise out of what they see. Everywhere they come upon traces of forms of building or of detail derived from some constructive necessity originally prompted by a material no longer in use. On the walls of an Assyrian palace (fig. 52) Epergos notices "that the walls are very frequently ornamented with large vertical cylinders, like trunks of trees put close together. 'Yes, that is a tradition of the first constructions of our ancestors, which were made of trunks of trees placed together; and though we now build with bricks, we have preserved the *souvenir* of that primitive structure. In fact, I remember having seen in Media houses thus built.'" It is in Assyria also that they learn of the first experiments with the flat-coursed arch, and the proposal of a very clever man, Kabu, to carry the walls right round the top in an unbroken semicircle, and of the difficulty he had in getting his views accepted; "the elder men pronounced him crazed, asserting that a wall ceased to be able to stand the moment it deviated from the vertical." Kabu made a small model, and was told that it might do very well in miniature, but would never answer on a large scale; whereupon he built an arch on a large scale, and was banished for sorcery, leaving his idea behind him to be worked out by the next generation. The fate of Kabu, in a sense, is certainly no uncommon one.

In the chapter on Ionian buildings, it is noticeable that our author derives the Ionic capital from a wooden bracket which is only a modified form of the Indian bracket, and which is shown in the interesting sketches of the interior and exterior of an Ionian house, before the stone style was fairly formed; and where the germ of the later Ionic capital appears in the bracket, which though flat-sided and only as thick as the support one way, stretches far on each side of the post the other way, in the parallel direction to the beam which it carries, and for which it provides a better seat and a shorter bearing than the wooden support alone would have afforded. The theory which regards the Ionic capital as arising from a bracket developed altogether in the longitudinal and not in the transverse plane of the construction, seems at least as probable as any explanation that has been offered; the suggestion illustrates the author's capacity for going back in thought to the first form of a structure by a process of inductive reasoning. It is noticeable, however, that in coming to the Doric style in a subsequent chapter, the author entirely opposes, at some length, all idea of its wooden origin in detail, instancing the Doric capital as a form utterly unsuitable to, and unsuggested by, timber construction. Of course in its finished form it manifestly is so; but the idea of the wooden theorists is only a square block of wood, the moulding coming afterwards in the refined marble edition of the style. Viollet-le-Duc's opinion evidently is (and there is reason and analogy on his side) that anything like a support placed between beam and post in a wooden construction would take, and has always taken, the form of a bracket the long way of the construction, not that of a flat square abacus of slight projection, which is essentially a stone form. This, and a great deal more which is very well put about the origin and theory of that superb architectural style (which the author, in spite of his usual Gothic leaning, does full justice to), is put into the mouth of Eicos, an Athenian architect, at a small wine party at which Epergos was present. Eicos concludes his argument thus:—

"'I say again, it is scarcely admissible that a wooden structure suggested the stone structure in the Doric order; indeed, I should rather suppose the converse, especially since the further we go back into antiquity the more the entablatures of the Doric order deviate from the style of a structure in wood, to conform to that dictated by the use of stone. Still, it must be acknowledged that our architects have been able skilfully to adapt the form to the structure in both cases.'

'By Athene!' said Chremylus, 'Eicos shows that he understands his art; fill his cup; he must be thirsty: I do not regret having got him to put wooden entablatures on the columns of my porticos, since he demonstrates so ably that they are in place there. But,—the rogue!—he did not tell me all this when we were talking about putting them up; indeed, he assured me that it was a shame to put these painted timbers on columns of marble.'

'It would evidently have been better to complete them with marble,' replied Eicos.

'Yes, certainly; but could you protect me against the informers who were beginning to croak like frogs after rain, when they saw the columns carted here? And, what would they have said if, after the columns, the ox-teams had brought the entablatures of marble!'"

The quotation may serve as a specimen of the author's lively style of presenting his ideas. An interesting point is touched further on in the same conversation, when Epergos asks why the Greek builders have never adopted the vaulted roof, familiar to the Dorians and Hellenes of Magna Græcia and Sicily. Eicos tells him it is partly, perhaps, that the Greeks do not care to copy barbarians, but also a strong reason is that vaultings require a coarse kind of work, which is not to the taste of the Greek artisan, who desired that all his labour should be such as should be seen and appreciated for its artistic results:—

"'The capitals in the portico of this residence,' continued Eicos, 'were turned and cut by four skilful workmen; if one of them should chance to be summoned to this house, you may be quite sure he will cast a loving look at the parts wrought by him. He knows thoroughly well whether they are on the right or the left side. It is owing to this feeling of pride, which is sometimes beyond bearing, that we are able to secure work whose execution is perfect. *It is quite sufficient to tell one of our artisans that the work of one of his comrades is more careful than his, to make him surpass himself.* But we have great difficulty in getting even tolerable work, if it is not destined to attract observation; every one tries to shirk it. In such cases we are obliged to have recourse to slaves. This, too, is the reason why you do not see among us such enormous edifices as those of Egypt. No one could be found to cut the crowning stones, the work in which, on account of the height, can only be appreciated by the birds.'

'There is matter for reflection here,' said Epergos, after a moment's silence. 'I see how the matter stands—and this explains antagonisms I did not perceive. You love the arts so well that you make a point of keeping their various expressions within easy grasp. If your edifices are small compared with those of many other nations, it is because you wish to enjoy all their parts at a glance—to embrace their *ensemble* easily. Hellas has no such palaces to show as those of Babylon, which are too vast for one day's exploration.'"

Epergos's interlocutor, in reply, further explains that in a democratic community there is an objection to very large buildings; citizens who are fortunate enough to possess large property must not offend the democratic sentiment by making a public display of it. The connexion of despotism with the production of great buildings was touched upon in our own columns some time since.* The fact is unquestionable; though, as we then pointed out, the influence of wider and more general art-education would go to raise the same desire in a federal society for grand architectural monuments, which was once confined to the "great ones" of despotic and feudal society. The desire for public recognition of his work by the Greek artist, inferred in the above quotation, is quite in keeping with what we know of the Greek character; it forms a striking contrast to the idea of devotion and self-effacement, which is regarded by modern critics, perhaps not altogether correctly, as a leading characteristic of the Mediæval artist. The sentence we have italicised is worth note, whether true or not as a representation of the Greek workman. In modern England, to tell a workman that another is surpassing him is to kindle no spirit of emulation; it is only to put him on finding means of stopping and crippling the superior powers or energy of the other. A state of things more deplorable,—we might say despicable,—in the field of skilled labour could hardly be imagined. Let us hope the time is not far off when the English craftsman will learn to be ashamed of it.

We must pass over the experiences of Epergos among the Romans, interesting as they are, merely quoting one remark which touches a question that has been sometimes rather hotly debated. Being entertained in the house of Mummius, a wealthy Roman, and asked what he thinks—he who has traversed Greece, Asia, and Egypt,—of his host's museum, Epergos replies that he has not been able to reconcile himself to the love for collections of works of art "which is so much in vogue in the cultivated class of Roman society. I like to see works of art in their proper place; so that when I find them thus assembled in a gallery, my thoughts involuntarily recur to the buildings from which they have been carried off." Epergos, in fact, as he sums it up afterwards, "prefers an orchard to a fruit-stall." So does every one if he can get it; but we cannot stop here to argue the question, about which there is, no doubt, something to be said from Epergos's point of view. In their further wanderings over various parts of the world, the pair of undying critics get into the Mexican neighbourhood, and among the architecture of the Nahuans and the Toltecs. In the exterior of the Nahuan palace, of which a view is given (p. 305), they find again the remains in masonry of a timber construction, evidenced particularly in the want of bond between the stones of the masonry, which are set like the squares of a chess-board. Their native *cicerone* tells them that in former times their buildings were in fact built of logs superimposed and corbelling out, and these unbonded stones represent the ends of the logs. "But what is the good of that, when the material has been changed?" "Because we have seen ancient buildings thus fashioned, and we wish to preserve the remembrance of them." The same string is harped upon when we come to the Renaissance period; the theory which per-

* See "Architecture and National Polity," in the *Builder* for September 24, 1870.

vades the book, and aids in giving continuity to the subject, that mankind can never wholly shake themselves loose from or forget the past, is continually exemplified:—

"'My good and learned friend,' said Epergos to Philibert, an architect in great request in the construction of important buildings, both in the provinces and in the city,—'My good and learned friend, despite all you may say, your architecture is neither Greek nor Roman, but, really and truly, French architecture in the reign of the most Christian and most glorious King Charles the Ninth, who no more resembles Pericles or Augustus than your palaces do those of Athens or ancient Rome.'

'Indeed,' replied Philibert, 'did not the great King Francis, like the Medici, and other princes whom it is needless to mention, send for and purchase all sorts of rare books that could be found in Syria, Egypt, Greece, and other foreign countries, in order to enrich his libraries and facilitate the investigations of the learned in matters relating to Pagan antiquity, and particularly the noble art of architecture?'

'Say that, if you please, in your writings, my good friend, but I should like much to see those ancient books which instruct you in your profession.'

'Well, then, there is Vitruvius.'

'I grant you him, with all my heart; but go on, please?'

'Frontinus, Cicero, Herodotus, Plato, Aristotle, and others.'

'My good friend, you might read Aristotle, Plato, Pliny, Cicero, and Frontinus, for a hundred years; but I will give you a kingdom, if you will find enough information in them all to enable you to build a house. . . . . Your charming mansion is a French mansion, planned like those erected one or two hundred years ago; only, instead of pointed arches, you have put semicircular arcades in your porticos; instead of Gothic piers, you have put Roman Doric columns, with caryatides above. In place of pyramidal roofs on your pavilions, you have erected square cupolettes, surmounted by lanterns. It is a dress in the fashion of the day; but the body has changed neither in form nor structure. Mind, I am not finding fault; I am simply making an observation.'"

In the last chapter, where eight persons are met at Brébant's to celebrate the promotion of a naval officer, who was one of the party, some of the company complain that this view, again brought forward, is taking away all the picturesque force of national and secular contrasts. "Epergos is intolerable," said a painter who was present; "he puts a grey glaze over everything." Epergos's "glaze" is, however, of a very luminous quality in itself, and if it rounds off the picture a little too much to an even tone, it serves at least to give a remarkable unity to the whole.

SIXTEENTH-CENTURY GOTHIC ARCHITECTURE.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

A SPECIAL general meeting of the Institute, to consider the recommendations of the Council with regard to the award of the Royal Gold Medal, the Soane Medallion, and the other medals and prizes of the Institute, and to consider the conditions of medals and prizes for session 1876-7, preceded the ordinary general meeting on Monday evening last. The business of the special meeting was not concluded until half past nine o'clock, and therefore it was fortunate that the two papers originally announced for the evening were not both on the programme. As it was, the reading of Mr. Sedding's paper, of which we append an abstract, was not concluded until half-past ten, when discussion was out of the question. Mr. C. H. Cooke presided We are not at liberty to give any detailed report of the discussion which took place at the special meeting, inasmuch as, although reporters were present, the meeting was intended for members only. We shall be committing no breach of faith, however, by giving the list of prize-winners, and by recording the fact that a prolonged discussion arose on the Council's draft conditions for prizes for next session, some of which, it was contended, were not sufficiently complete and explicit. These were amended and added to by the meeting, with the view of preventing, if possible, any future *contretemps*. The following recommendations of the Council were unanimously agreed to:—

That the royal gold medal be awarded, subject to her Majesty's gracious sanction, to M. Joseph Louis Duc, Knight Commander of the Legion of Honour, member of the Institute of France, honorary and corresponding member of the Royal Institute of British Architects, &c.

That the Soane medallion (with the sum of 50*l.* added, under the usual conditions of Continental study) be awarded to the author of the drawings submitted under the motto "Loyal Espoir" (subject: Design for a Country House). The author's name was announced to be Mr. J. Conder.

That in the same competition a medal of merit be awarded to each of the authors of the drawings submitted respectively under the motto "Εις αριστον" and the device of a triangle. The author of the former was stated to be Mr. William Niven; that of the latter, Mr. J. O. Harris, Leicester.

That Sir William Tite's prize of 40*l.** be awarded to the author of the drawings submitted under the device of a square and a cross within a circle (subject: Design for a Public Concert-room). Author, Mr. Alfred Reading, Handsworth, Birmingham.

That the Grissell Medal be awarded to the author of the drawings submitted under the device of a star within a circle and the letters T.B.A.K. (subject: Design for a Hall and Staircase, showing their construction). Author, Mr. Geo. D. Stevenson.

That the Institute Silver Medal and 5*l.* 5*s.* be awarded to the author of the measured drawings submitted under the motto "Try" (Building illustrated, St. Alban's Abbey). Author, Mr. James Neale, St. Alban's.

That in the same competition another Institute Silver Medal be awarded to the author of the measured drawings submitted under the motto "Waverley" (Building illustrated, Dryburgh Abbey). Author, Mr. James Lindsay, of Glasgow.

That the Student's Prize in Books be awarded to the author of the drawings submitted under the motto "For a Park" (subject: Design for a Park Lodge). Author, Mr. Henry Branch.

It was stated that no essays had been received in competition for the Essay Prize of 1875-6.

* This is the first award of this prize, and owing to lapse of time in making arrangements, there is an accumulation of 10*l.* over and above the normal value of the prize, which is 30*l.*, to which sum it will in future be confined.

The business of the special meeting concluded, the following new members were balloted for and duly elected, viz.,—as Fellow, Mr. Robert Walker; and as Associates, Messrs. G. H. Birch, R. Griggs, and J. W. James. It was announced that Mr. Goodchild had presented two views, tinted by the late Professor Cockerell, of the interior of Wren's first design for St. Paul's; and in answer to a question by Mr. Wyatt Papworth, it was stated by the chairman that the committee on the Affairs of the Institute was losing no time in carrying out its duties.

Mr. F. P. Cockerell wished to say, before Mr. Sedding commenced to read his paper, that finding that his (the speaker's) paper promised for that evening ("Notices of Deceased Foreign Members") contained a mass of matter which would hardly prove interesting if read to a public meeting, he had proposed to forego its reading, but to print it in the "Transactions." Since that determination had been arrived at, however, Mr. Brassey, M.P., had written to say that, owing to his Parliamentary duties, he should be unable to read his promised paper on the 27th inst., "On the Rise and Fall of Wages in the Building Trades"; therefore his (Mr. Cockerell's) paper would be read on that occasion.

Mr. J. D. Sedding then read a paper on "Sixteenth-century Gothic Architecture." He remarked that the three central charges made against this period of Gothic architecture are that its structures betray inert purpose, effete thought, and such a use or misuse of ornament as led its designers to rely solely on the exuberance of its enrichments for their effects. The whole of these charges could (said the author) only be met face to face with the productions of the period; but it seemed to him that the first and second reflected as much, or more, upon the era which produced the work than upon the art itself. First, then, of the spirit of the time, and the mutual reaction of the age and the art upon each other. The epoch was one in which two important movements were in progress, not altogether dissimilar in their impulse, though outwardly disconnected in their agencies,—an artistic and literary revolution known as the Renaissance, which had its generation in Italy, and a religious revolution which had Germany for its head-quarters. England was not exactly apt at adopting new ways of thought or action; yet, in those active, swift-minded days, there was change in the air, and it was not possible for one nation long to hang back when others had eagerly assimilated one or other phases of these movements. With regard to the third charge, of overdone ornament, a degree of spiritual beauty might exist in both the simpler and the more ornate phases of art; yet every one would grant that art was in most peril when most susceptible of embellishment, or, to put it in Shakspeare's words,—

"Ornament is but the guilèd shore
To a most dangerous sea."

Still, this did not say that there was no such thing as legitimate ornament, or even a legitimate magnificence of ornamentation. The defence of the period under review, however, rested on the proof that the proper bounds of ornamentation had not been overstepped. Assuming that a fine-art composition consisted of two parts, its structural thought or primary purpose, and the artistic expression in which it was arrayed, most frequently those parts had no real relation to one another, as, for instance, the grouped cylinders of Early English architecture, which had no real relation to construction whatsoever, "but," in the words of Ruskin ("Slade Lectures," Oxford, 1870, pp. 21, 22), "in fact, contend with it, and deny the construction, their principal purpose seeming to be concealment of the joints of the voussoirs." On the face of it, it was quite conceivable that both the structural thought and the artistic expression were, separate or combined, liable to abuse, according to the fluctuations of taste. But it could not be otherwise than that the highest art should be that which united the highest qualities of both thought and expression. Early work had been described by Mr. Ruskin as bearing more or less the character of a good solid wall with irregular holes in it, well carved where there was room. This sounded like simplicity and goodness itself. But there were two kinds of simplicity, that of schooled restraint and chastened purpose, and that which sprang from artlessness and impotence, and, in Mr. Sedding's opinion, the simplicity of early work answered to the latter description and not to the former. For, when we examined sixteenth-century work, we found that, unlike the unequal past, it summoned to its aid every secret of the artist's craft, and every power of his hand and brain. As to the legitimacy of its magnificence, it was, the author contended, both possible and good to unite a gorgeously-coloured diction to noble thought, just as it was right and possible to wed forceful lines in architecture to a studied magnificence of style; and—to use a literary simile—it was only when word-painting became so florid that it obscured thought by its pointless conceits; when diction and style were followed as the end, instead of the means, that we might consider ourselves fallen on evil days. Briefly, the resources of the accumulative phase of architecture characteristic of the sixteenth century were these: carefully-considered structural effects; the admixture of architectural mouldings with fanciful sculpture; great constructive science exhibited in balanced masonry of fretted roof or internal or external supports; delicate execution of freehand carving; sculpture in niches and canopies, traceried wall-surfaces, parapets and buttresses, and wherever there was room. All these scientific and artistic embellishments did the Gothic artist of the sixteenth century bring to harmonise with the constructive necessities of the building under his hand, and therewith graced the last crowning efforts of his ancestral art. The work of the period was thoroughly characteristic of the national genius; it was historic, and bore the marks of a self-sustaining life; its creations had an independent and a relative value, and they were good in that they were pleasant, profitable, and honest. Though not devotional, the work was earnest and serious, like even the most fanciful English work of that day; and what it lost in ascetic spirit it gained in increased graphic power and naturalesque treatment. Its human interest was also enhanced by playful renderings of home-life and home-pursuits, personal badges, emblems of trade and industry, or fanciful rebus, while it was by no means negligent of the higher region of figure-sculpture, nor forgetful of brute and flower. Let it not be said, in the words of Shakspeare, that this "gracious voice obscures the show of evil"; that it was assumed virtue "hiding the grossness with fair ornament"; because he (Mr. Sedding) failed to see the corruption of the stock to which these fair features were engrafted, and it rested on those who made the assertion to prove that the enrichments were applied to conceal defects, and not to enhance beauty. And all the while one was canvassing its characters, one felt that the death-knell of Gothic art was being tolled, even as

"Fancy dies
In the cradle where it lies."

But the last passage of its life was clearly not that of an imbecile thing dying of inanition; nor was it destitute of the elements of grandeur and pathos. Though old with the weight of years, it revolved memories of a glorious past, and fought gallantly to the last for a place in English hearts. And gathering all its forces together,—uniting skilled and elaborate architectural form to the splendid harmonies of colour and sculpture,—it was only put to silence as the last ray of Mediævalism faded from English soil. In illustration of his remarks, Mr. Sedding described a few typical examples of a class of erections specially connected with the sixteenth-century phase of Gothic architecture, viz., chantry-chapels, erected as separate structures for the tombs of great men. Thus we found that the first stone of Henry VII.'s Chapel at Westminster was laid in 1503. One year later the chapel for Prince Arthur's Tomb was erected in Worcester Cathedral. About the same time was built Bishop Alcock's Chapel at Ely, and a host of others followed, too numerous to mention in

detail. Chantry chapels were chapels endowed with a yearly revenue for the maintenance of one or more priests to say or chant mass for the souls of the donors and others named by them. Having described in detail the Greenwaye Chauntry at Tiverton (date 1517), the Speke Chauntry in Exeter Cathedral (date about 1520), and the Lane Chauntry at Collumpton (date 1528), Mr. Sedding concluded by saying that the English artist of those days, like his progenitors of earlier time, held to Nature as his mainspring. He got not only as much, but even more, delight and content out of the hedgerows, and the flowers, and the beasts of the fields than they, and also much more out of the familiar incidents of common life—the provinces of their labour differing (1) because Gothic art was elastic, and therefore admitted of accessory characters; and (2) that the children of different epochs needed their own special mode of expression. And wherein did the distinctions lie between the dealings with Nature of the early and late phases of Mediæval art? Mainly, in that the early schools came to Nature timidly, and with a childlike simplicity, while the latter schools treated her with familiarity. And it seemed to Mr. Sedding that these diverse attitudes were explainable by the light of the varying degrees of culture of the artist's times, and the changed requirements of their art. The early sculptor learned humble lessons of her, because his limited perceptions kept him unconscious of the great extent of her capabilities for art purposes. On the other hand, the familiarity apparent in late work spoke of a closer identification of man with nature. Hence the individualism of the workman and the naturalism of his art; the inauguration of an elaborate style, enriched by graphic and picturesque sculpture, being the result of a fastidious taste that called for the greatest excellence that could be had, and demanded a display of the studied effects of a conscious art. So we might look at this epoch as a sort of middle stage between early art and the art of to-day; neither quite ancient nor quite modern; neither quite conventional nor ideal; and, just because of its complex character, getting small favour from the style that immediately succeeded it, or from the romantic antique Gothic of to-day. This epoch was the middle stage of English art, and hence its importance and interest to us, for as the horizon was lifted we got a glimpse into the character of the art that was to succeed it. From that period to the present, the ever-increasing identification of man with Nature had been slowly but surely going on; and in our day the old enthusiasm for her had found a new channel, and had emerged into still fuller light through the works of Landseer and Turner. But it was not the simple nature that these men dealt with; it was Nature spiritualised by man's imagination, exalted by an indescribable charm of poetical emotion, till, in contemplating Landseer's pathetic tragedies and comedies of brute beasts, or the landscapes of Turner transfused by his exquisite imagination, the spectator was puzzled to know whether the spirit of the things pictured had passed into the artist's brain, or whether the man himself had been absorbed into them. Yet in truth these men, as they passed on to their triumphs, did but catch up the links of old English art in the far-off times, and did but take up the less perfectly arrested work of the great unremembered dead of earlier days, with whom they now rested from their labours.

On the motion of Mr. M'Vicar Anderson, a vote of thanks was given to the author of the paper, and the meeting terminated.

PRIZE DESIGNS AT THE INSTITUTE OF ARCHITECTS.

THE designs sent in competition for the various annual prizes offered by the Institute made a very good show on the walls of the Institute room at the last meeting. The designs submitted for the Soane medallion were for a country house, the one selected being that marked "Loyal Espoir," by Mr. J. Conder. We must concur in the judgment which gave the medallion to this design, which has a very fine and effective plan as regards the entertaining-rooms, and is admirably drawn, and put together with knowledge and thought; but the external design has not the homelike repose of character which should belong to a country house: it has too much of a town-hall appearance. The oblique placing of the conservatory is not quite happily managed, and looks too much like an afterthought. "Triangle," by Mr. J. O. Harris, is a picturesque external design, in half-timber style, and fitter for its object than the last-named; but there is nothing special in the plan. Εἰς ἄριστον, by Mr. W. Niven, shows a good Jacobean exterior, of a type, however, which looks better when old and weather-stained than when new; it is a little too mechanical and regular. "Aspect," a Gothic design, shows some good qualities, and the author treats his staircase fenestration in a picturesque manner.

The design for a concert-room, for the Tite prize, is a well got-up set of drawings, but presents nothing original in design, and in the general plan the author (Mr. A. Reading) has taken St. James's Hall for his model, which is not by any means a satisfactory one. There is no evidence of the author of the design having thought of the peculiar requirements of a concert-room, or the best way to meet them at all: except for the orchestra seats, it might be any room for large meetings. When a special subject of this kind is given, there should be an attempt to study and solve the problem on its own special grounds, not merely to make drawings. The prize for the Student's designs for an entrance-lodge has probably been awarded to Mr. H. Branch partly on the ground of the perspective sketch, which is good, and shows the small design to advantage; but there is more style and originality in the one marked "Tudor."

The prize for measured drawings has elicited two admirable sets of drawings, those of "St. Alban's Abbey," by Mr. Neale, and of "Dryburgh Abbey," by Mr. Lindsay. The prize was adjudged to the former set, which, indeed, are of great excellence, both as to accuracy and effective drawing; but the Council thought so highly of the other set that they gave a second prize to the author, who, it was mentioned, was a very young student, and whose careful drawings do him the highest credit. The response to the offer of prizes this year has not been great in regard to quantity, but no complaint can be made of the result as regards quality.

ARCHITECTS' BENEVOLENT SOCIETY.

THE annual meeting of this Society was held on the 8th inst., in the Library of the Royal Institute of British Architects, Conduit-street, Mr. Horace Jones in the chair, in the unavoidable absence of the president, Mr. Sidney Smirke, R.A. There were also present Messrs. G. J. J. Mair (treasurer), Wyatt Papworth, H. H. Collins, Benjamin Ferrey, J. H. Hakewill, S. W. Kershaw, Mr. J. Goldicutt Turner, and others. The chairman read the following annual report:

The Council has again to congratulate the Society on the advance, however moderate, it has made during the past year. The list of annual subscribers contains seven new members, and three others have doubled their contributions. The amount received during the past year in subscriptions and donations has been 313*l.* 0s. 6d., whilst in the year previously, from the same sources, the gross receipts were 299*l.* 16s. 6d. On the other hand, five members have died, and the number of gifts made has increased by five, causing an additional call upon the funds of 41*l.* The total amount expended by the Society in gifts to applicants during the past twelve months has been 318*l.*, and this by no means represents what the Council have wished to do, but simply that which they have felt themselves capable of doing. They continuously regret that the means of the Society do not increase in proportion to its needs; they hope, however, that they may reasonably look forward to a more auspicious period, inasmuch as sumptuous buildings, both public and private, are rising, not only in London, but in all the great commercial centres of the country, many involving an expenditure which but a few years ago would have been considered extravagant or excessive. It is hoped that the benevolent feeling of our professional brethren, who are receiving emoluments from these costly structures, may be roused to nobler efforts to lighten the oppressive mass of suffering that assuredly exists among the humbler and less fortunate class. The junior members of the profession, if so the Council may designate those enrolled under the banner of the Architectural Association, set the good example of year by year making their contributions in excess of the last; thus in the year 1874 the Society received, through collections made by the officers of the Association, 4*l.* 2s.; last year it was 5*l.* 19s. 6d. In addition, the president of the Association lends us his countenance and gives us his sympathy in his inaugural address to his constituents. The Royal Institute of British Architects continues to do for us what has been in years past, and will ever be, a great relief to the working expenses of that society, viz., it provides us with a shelter whereunder to hold the meetings both of the council and of the society in general; and the council again takes this opportunity of bringing this fact under the notice of its subscribers, and of manifesting to the Institute its appreciation of such a convenience and saving in its economy. That there is need for exertion in the direction of strengthening the council's hands by increased subscriptions, so as to place under its command larger funds to administer, those who are engaged in the practical working out of the work of the society can testify, and, if need be, give distressing accounts of the decayed members of the profession, the widows, and the orphans, who are around us pleading earnestly for aid. The council hopes and firmly believes that these pleadings will not be passed by unheeded, and that in the next year's report it may be enabled to announce a great accession of income. The Council, in announcing their regret at the resignation of Mr. John Turner, who has held the office of honorary secretary to the Architectural Benevolent Society for a period of more than a quarter of a century, desire to tender their cordial thanks and acknowledgments for the very able and zealous manner in which he has performed the various duties entrusted to him, and likewise for the care and untiring energy evinced by him in carrying out the principles laid down for his guidance in the distribution of the benefits afforded by the Society. Impressed as the Council and its former members are with Mr. Turner's valuable services, so satisfactorily and advantageously bestowed in the faithful discharge of his official duties, and his liberal support to the Society's funds, the Council are not unmindful of the deep debt of gratitude which the profession owes Mr. John Turner for having mainly founded the Architects' Benevolent Society. In conclusion, the Council begs to announce that, under Bye-law 70, it has made during the past year its first grant of an annuity, and that this has been to the almost destitute widow of a most distinguished and accomplished member of the profession, one who was a Gold Medallist at the Royal Academy, who had a large practice, and was one of the founders of the Royal Institute of British Architects.

The report was unanimously adopted, as was also the balance-sheet, which contained the following items, viz.:—Subscriptions, 226*l.* 11s.; donations, 86*l.* 9s. 6d.; dividends on stock, 62*l.* 16s. 2d.; these amounts, with a balance of 127*l.* 9s. 1d. brought forward from previous year, making a grand total of 503*l.* 5s. 9d. The working expenses of the Society amounted to 77*l.* 3s. 11d.; 30*l.* were expended in the purchase of additional stock; and the amount of gifts to applicants was 318*l.*, leaving a balance in hand of 78*l.* 1s. 10d. Votes of thanks were given to the auditors (Messrs. C. L. Eastlake and John Young) and to the officers and council, and Mr. John Goldicutt Turner was unanimously elected hon. secretary. Messrs. Edwin Nash & Christopher Eales were elected auditors, and the existing officers and members of council were re-elected, with the exception of Messrs. C. J. Knight, C. Barry, B. Ferrey, E. N. Clifton, and A. W. Blomfield, whose term of service on the Council had expired, and who were replaced by Messrs. E. A. Grüning, H. H. Collins, James Edmeston, Edwin Nash, and Robert R. Arntz.

SOCIETY OF LADY ARTISTS.

THE committee of this Society have hung 666 works in their Gallery, 48, Great Marlborough-street, forming in the whole a very agreeable exhibition. It includes a number of excellent pictures, and is disfigured by fewer ugly blots than has been the case on some previous occasions. The Society is probably regarded merely as a stepping-stone by many of the members, but even as thus it has its use. If there were no recruits we should soon have no veterans. We will not pretend to examine and compare: all we can do just now is to mention a few of the artists whose works fell under our notice in the bustle of a more than usually crowded "private view"; first suggesting to the hanging committee that on another occasion they should let the numbers run on, and not, as now, stop at 544 on the walls and begin with No. 1 again on the screens. Such a mode is very inconvenient. Mrs. Marrable sends the largest number of pictures, and shows considerable advance in her art. No. 172, "Sunset on the Pitz Roseg, Engadine," and 173, "Looking towards Como," are charming works; No. 148, the largest of her pictures shows a striking effect of "Sunshine on Monte Rosa." Miss Rayner sends a number of capital little drawings of places. Miss Louisa B. Swift has made dogs her speciality, and has few rivals in the field. No. 192, "The Quiet Joys of my Kennel," is a remarkable specimen of her work. Her sister, Madame Bisschop, sends an excellent picture, "Pour les Pauvres" (492), and other members of the family, Mrs. Swift and Miss Georgina Swift contribute effectively. Mrs. Jopling is one of the stays of the Society, for proof of which we may point to (228) "Louis XVII." Miss Gastineau reminds us greatly of her father in (418) "A Glen near Loch Goilhead, Scotland." No. 246, "Far Away," by Hilda Montalba, is one of the most interesting pictures in the collection. Useful contributions will also be found from Miss Elizabeth Thompson, Miss Warren, Miss Walter, Miss Edwards, Miss Alice Manly, Madame Bodichon, Mrs. Benham Hay, and other known artists.

Northumberland Avenue.—This Saturday (the 18th) has been fixed for the opening of the new street on the site of Northumberland House, Charing-cross. The proceedings, which will take place at one o'clock on the day named, will be quite of an informal character.

PROFESSOR E. M. BARRY'S LECTURES ON ARCHITECTURE.*

IN my last lecture I described most of the public buildings of Pompeii. On the present occasion, our attention will chiefly be directed to its domestic architecture. But, before discussing in detail the plans and arrangements of the houses of private persons, it may be as well to examine the remains of some buildings of a class which serve as an interesting illustration of the habits and manners of the Romans,—I mean the public baths.

Visitors to Rome are aware of the magnificence of these edifices, from having seen the splendid ruins of the Baths of Caracalla and Diocletian. Some idea may be formed of the grand scale of the latter from the fact that the great hall was converted into a church of noble dimensions, by no less an architect than Michelangelo. This church, which goes by the name of Sta. Maria degli Angeli, is, even now, among the finest architectural monuments of Rome.

There were many public baths in ancient Rome besides the two great establishments which I have mentioned, and no Roman town was considered complete without its Thermæ. There are two public baths at Pompeii. The smaller, or old baths, shown on the drawings on the wall, were excavated in 1824, in a position near to the Forum, and therefore central, as regards the city. They are especially interesting, because from their smaller size,—as compared with the great Roman examples,—it is more easy to understand the uses of the several apartments into which they are divided.

In the capital, the bathing had reached to such a pitch of luxury that the buildings seem to have combined the attractions of the bath, the exchange, the theatre, the gymnasium, and even the modern club. The number of rooms in them is so great, that it is difficult to feel assured, in all cases, of their exact original destination. In the old baths at Pompeii, the scale was necessarily more modest, and the arrangements there will be found to correspond, very nearly, with those in daily use among Oriental nations at the present time. In fact, the plan which is now before you is not unlike the buildings which any one may now see at Constantinople or Cairo. The baths were not vapour baths, as in Russia, but were warmed by means of flues in the walls and floors, and the temperature was not very high.

The Romans attached great importance to their baths, which were as much a place of general resort as the Forum. A small fee was charged for admission, and different hours, or days, were allotted to the two sexes, in places where a separate establishment for women did not exist.

The bath is an institution of immemorial antiquity. It was well known to the Greeks, and was doubtless borrowed from them by the Romans. Indeed, the names of the various apartments are of Greek origin. Public baths had been multiplied excessively under the Empire, and after the rise of Christianity, the thermæ, like the basilicas, were often converted into churches, as we have seen in the instance at Rome.

Christianity seems to have looked with disapproval on the public baths, by reason probably of the abuses of them, to which the general corruption of morals had led. A change of life was necessary to the new converts, and a feeling arose that those who had once received the regenerating cleansing of baptism needed no further purification. It was this superstition which gave a reputation for sanctity to habits amongst hermits, monks, and others, which are repugnant to modern ideas, and led by reaction to the maxim accepted by medical science, that cleanliness is next to godliness. In Spain, after the conquest of Granada, one of the first acts of the intolerant victors was to forbid to the subject Moors the use of their public baths, and even private bathing was interdicted.

Let us now return to Pompeii, and endeavour to ascertain the probable uses of each portion of the building.

From its central position in the city we may assume that from the value of the site it was not found possible to indulge in any arrangements which required great space. At the same time, we may be sure that everything was provided which was really necessary, and we can thus form a pretty correct notion of what was considered by the Romans to be indispensable in their thermæ. It is supposed that, in addition to the public establishments, there may have been other private baths of less importance, especially sea-water baths, as Pompeii was situated on the sea-shore.

The old baths, now under notice, being surrounded by shops, had several entrances from the adjoining streets. These all communicated with an open court, surrounded on three sides by colonnades. In this court was found a money-box, containing the fees of the bathers. Seats of stone are found in the portico towards the south, and here were posted the notices, or advertisements, of the theatres, combats of gladiators, and other matters of public interest. A large recess in one of the sides of the court may have served as a more private retreat for the upper class of bathers, or for refreshments. It is well placed for such a purpose, as it could readily be served by attendants on duty in the baths generally. The central courtyard was planted with flowers and shrubs, and had possibly a fountain in the centre. In summer time, an awning over the whole would exclude the rays of the sun, and afford a pleasant shade and coolness. Some have supposed that this outer portico was a waiting-room only for persons about to bathe, or for slaves in attendance on their masters. Looking, however, to the small size of the other apartments, I think it is more probable that it served also as a waiting or cooling room, for those who had bathed, rather than for those only who were about to do so.

Having entered by one of the passages, the bather left his clothes in the *apodyterium* or *spoliatorium*, having deposited his outer garments, and probably his sandals, in the waiting-room. The *apodyterium* probably served not only as a room for undressing, but also as a cooling-room, for those who preferred it to the outer court. There are niches in the walls; these may have contained the clothes and property of the bathers, which were placed in the charge of slaves, or attendants, liable to the penalty of death in case of theft. The chamber was warmed by a large brazier of bronze, which was discovered in it, and which was probably convenient for warming clothes, and the linen used in the bath. In the outer room, holes exist in the walls, and it is conjectured that wooden poles were inserted in them, to carry the towels and linen while drying, just as we see in the Eastern baths nowadays.

From the *apodyterium* access is obtained to the next chamber, the *caldarium*, or *sudatorium*. This was the hot room, and at Pompeii was probably used for various purposes, for which in larger structures separate chambers were provided. The floor is furnished with flues for heating, and the bathers probably wore wooden shoes, or pattens. At the upper end is a circular basin, or fountain, from which cold water might be obtained for the head; and at the other end of the room is a plunge-bath of hot water. Couches round the walls, or thick mattresses on the floor, were probably arranged for the convenience of the bathers.

Having left the *sudatorium*, the bathers, or those of them who cared to do so, could pass into another room, where cold water was found. This chamber was constructed with a basin in the centre for plunging or swimming, called the *natatorium*, or *baptisterium*. The most accepted name for the chamber itself is the *frigidarium*. You will notice that it is so placed that it might be conveniently used by those who did not wish to enter the other parts of the bath, while it might also be available for bathers who had already done so. This is quite consistent with the habits of the East; for in Oriental baths generally, the use of cold water is not encouraged, and forms no part of the regular course of bathing.

The furnaces for heating are placed at the side; and adjoining them are some chambers of irregular shape, the use of which has been much disputed. Sir W. Gell has termed them the women's baths, but others have thought that they are only the old or original buildings, which had been superseded in course of time by those which I have just described. They are very inferior to the latter, in size, style, and decoration, and do not call for detailed description.

Much surprise has often been expressed at the small size of the building we have been discussing, and recent excavations have shown that it was not the principal bath of Pompeii, a more extensive structure having been discovered near to the theatres. These are called the Great or Stabian baths, and are very interesting architecturally. The arrangements are very similar to those in the smaller baths. You will see them marked on the map, and they are supposed to have been built about 150 years before the destruction of the city.

Considering the bathing propensities of the Romans, it is possible that further excavations may even yet bring to light other buildings of a similar nature. The men used the public baths more than the women, and, it has been said, even passed half their time in them. It does not necessarily follow, however, that this was from choice; for we shall see presently, in treating of the private houses, that these were nearly destitute of warmth and comfort,—matters for the want of which even the charms of a Neapolitan climate might not compensate. In their thermæ, on the other hand, the Pompeian people had an agreeable place of resort, well planned, covered, and completely warmed, and the whole available to them at a moderate expense. The same causes which lead many a poor man among ourselves to the comparatively comfortable public-house, had doubtless their influence, in olden days, in attracting the lower classes to the public baths, which formed so important a feature in the every-day life of the Roman people.

The architectural design of the building is pleasing, and the construction solid and good, far more so, indeed, than is common with Pompeian remains. The various rooms have arched roofs, and the natatorium is domed. The door to the hot room was set in jambs slightly inclined, so as to cause it to shut by its own weight.

The apodyterium is the chamber which is most highly decorated, and this is reasonable, because the bathers would spend more time in this room than in the others, and as it was only heated to a moderate temperature, there would be no vapour to interfere with the decorations. The pavement was of mosaic, composed of white tesseræ, with black borders. At the springing of the arched roof there was a bold projecting cornice, supported by a row of figures of the Caryatid character, with their arms upheld. Some have supposed these figures to represent fawns. Between the figures were the niches or recesses to which allusion has already been made, and which served as receptacles for the clothes of the bathers. The vaulted ceiling was panelled with ornaments and figures, delicately executed in low relief, in stucco. The caldarium was also vaulted and decorated, but the construction and ornament were both simpler than in the apodyterium. Although the bath was a hot-air bath, there must always have been a considerable quantity of vapour from the water used in it. This would not only have destroyed any elaborate ornamentation, but would have rendered it difficult to see and appreciate any but simple details. In the cool rooms windows exist for light, and there are holes in the vault of the caldarium for a similar purpose. This is in accordance with the custom at the present day in Turkish or Eastern baths. The holes were probably covered with glass or shutters.

Taken altogether, these baths are among the most interesting ruins in Pompeii, and are a fair indication of the architectural taste of its former inhabitants.

We will now turn our attention to the dwellings of the latter. Having considered the temples and public buildings generally, let us see what the ruins of Pompeii can tell us about the homes of its people.

Greek as were the traditions which evidently guided to a very great extent the architecture of Pompeii, the houses may, nevertheless, be described as Roman in their plan and arrangements, and they include the hall, or atrium, which was a distinctive Roman feature. The plans of the houses at Pompeii agree, also, in a remarkable degree with the remains discovered in Rome itself. We may, therefore, briefly consider with advantage the characteristic features of Roman houses. We shall find them very uniform in their general arrangements, and for this uniformity there were various reasons. Beginning with such simplicity that permanent roofs were unknown, the Romans ended by giving scope to all the refinements of decoration and luxury which the wealth of later times had rendered possible.

In early times, rigid sumptuary laws regulated the style in which each class might live, and it was a special privilege of senators to have their door of entrance opening to the street. Most of the houses at Pompeii consisted of one story only, and this was the original mode of construction. As, however, ground became more valuable, and population increased, buildings of several stories

* Third Lecture, delivered at the Royal Academy on March 9, 1876.

became common. These were finished with a flat terrace roof, called the *solarium*, which was used by the inhabitants as a place in which to take the air, or enjoy the sun in winter. Here also would sometimes be eaten the principal meal of the day, the *cœna*; and from this use arose the term *cœnaculum*, which was applied by the Romans to the upper story of their houses.

The construction of the walls was originally very slight, as no great strength was needed for buildings one story only in height. As height increased, however, an improvement became necessary, and the walls were made thicker and more solid. In late times it was found necessary to restrain the height of buildings in towns, and the Emperor Augustus issued a decree limiting the height of town buildings to 70 ft. This, however, was still thought excessive, and the limit was further reduced by Trajan to 60 ft.

It is interesting to find the Romans dealing with the same difficulties which trouble our municipal authorities in the nineteenth century, and it is curious to note that the height of 60 ft. prescribed by Trajan is the very limit which our own Metropolitan Board of Works recently sought (though unsuccessfully) to impose upon future buildings in London. There can be little doubt, I think, that some limitation is required in our great towns, not only in the interests of architecture, but in those of general convenience and the public health.

Ostentation of all sorts was sternly repressed in the early days of the Republic. Afterwards, the Romans, as conquerors of the world, could avail themseves of the experience of all nations. Admiring the arts of Greece, they corrupted them, and loaded them with ornamentation. Their houses became palaces, and brick gave way to marble.

The great patricians vied with each other in the magnificence of their dwellings, and even Cicero could spare time from affairs of State for the decoration of his villa at Tusculum. Augustus might be simple in his tastes, but Macænas has shown, by his villa at Tivoli, how completely the austerity of Republican manners had become lost in the magnificence of the empire. Nero followed, and exaggerated the prevailing taste for luxury, and after his time pure taste seems to have departed.

It is remarkable, however, that through all changes of scale and style, the plans of the houses preserved a great amount of uniformity. The dimensions might be more or less grand, the decoration elaborate or simple; but the general arrangements suffered little change, and they have left their trace on many of the earlier ecclesiastical buildings of Italy, and even on the private houses of comparatively modern times.

It is not, perhaps, to be wondered at, that uniformity such as I have referred to should be found among ancient buildings, for do we not experience it ourselves? Custom becomes, in time, almost a religion, and is as little to be transgressed. Local circumstances first give rise to some special type of plan, and this becomes an iron rule, against which it is difficult to strive. Who does not know the plan of the ordinary London house, so distressing by its monotony of front and back rooms, narrow entrance, and stairs squeezed on one side? If we could imagine our city suddenly overwhelmed, as was Pompeii, how much might not be written by its discoverers, centuries hence, on the uniform plans of the dwellings of the ancient Londoners?

Vitruvius speaks of Roman houses as if their arrangements were too well known to need description, and this was doubtless the case in his time. We should have been very glad, however, if he had told us more about them, as without the discoveries at Pompeii, his account would not be very intelligible. Thanks to the latter, we can now understand that the general distribution of parts was made according to a common custom, and that the houses of patrician and plebeian showed the same principal divisions, however much they might differ in details or decoration.

Bearing this in mind, let us proceed to examine the arrangements of the Roman habitation.

For this purpose, I will refer you to a plan which I have had prepared of an ideal house, founded on the discoveries made at Pompeii, and on the general information derived from Vitruvius and from the excavations at Rome. I have supposed it to have belonged to a wealthy patrician living in Rome. You can compare it with the plans of houses actually existing at Pompeii, and called after the names of Pansa, Sallust, and Diomede, which are also before you, and which will explain the authority for various parts of it.

Taking first the leading principles, we shall find the house divided into two great divisions, the public and the private. The Romans, while fond of public life, were jealous of the privacy of their domestic arrangements. As regarded the public portion of their houses, access was readily attainable, but they were not accustomed to entertain guests, and, when they did so, lodged them usually in separate buildings, rather than under their own roofs, although they occasionally accommodated them in rooms round the *atrium*, or outer hall.

The division, of a more or less public character, contained the entrance, the hall, and some of the surrounding chambers and corridors.

In the case of palaces, or houses of importance, there was usually an open space in front. This was called the *area*. It was sometimes planted, but more often laid out architecturally, and ornamented by statues or fountains. You will find the traces of this arrangement in the numerous piazze, or open squares, of modern Rome.

Opening from the *area* was the principal entrance, approached by a portico, or colonnade, which was sometimes arched. This adjunct, so useful in southern climes, served also to give dignity to the mansion to which it was the entrance. It was only applicable, as it would be among ourselves, to the more important buildings. At Pompeii it is not found, as the space in that small town is too much occupied to allow of it. In such cases, the houses had no piazza, or area, but there was sometimes a small porch or portico opening on the public street,—as in the building which goes by the name of the house of Diomede. The latter feature was, as I have said, at first reserved as a privilege of the great; but after the time of Nero it became common, and was in ordinary use in the improved houses built at Rome, after the great fires of that emperor's reign. The porticoes served to break the monotony of the streets, and afforded an agreeable shade, not only to the entrances of the houses, but also to the shops which usually flanked them. At Pompeii the streets are too narrow for porticoes, and their monotony and poverty of architectural effect are mainly due to this circumstance.

Between the portico and the *atrium* we find the vestibule serving as an out-door waiting-room, or approach to the house. This arrangement is not without architectural importance. However striking a building may be, the eye requires to be gradually introduced to it, and the effect of an interior is greatly enhanced by a proper mode of approach. In the palaces of the Romans vestibules were usually found; and Vitruvius says that in the mansions of great people they should be spacious and dignified. In smaller houses the vestibule was, of course, on a reduced scale, and was sometimes altogether omitted. In Pompeii it is found occasionally, but not in any case of large size. The arrangement of a vestibule is still found existing in the great churches of Rome, such as St. John Lateran and St. Peter's. It is, of course, only suitable on an extensive scale to important edifices of considerable dimensions, and of some architectural magnificence.

Entering the portico, and then the inner doorway, through the vestibule, the great hall, or *atrium*, is seen beyond; but between the door and the *atrium* is a corridor, or outer hall. This latter was called the *prothyra*. It was not only the entrance to the house, but also served as a means of access to the apartments on either side, which in small houses were sometimes shops, where the proprietor sold the produce of his farm or other property. In large houses they served as inner vestibules, or rooms for porters or slaves. The possession of a doorway in the street being reserved as a special mark of honour, the meaner dwellings had to be content with doors from the *prothyra*. There were in some cases more than one door, so that the master of the house should not be obliged to pass through the crowd of servants or dependents who thronged the vestibules and outer corridor of the mansion. In the *prothyra* was the place for the porter, or the guardian of the door, and sometimes a dog was kept there. It was this custom which led to the representation of dogs in mosaic, or in painting, on the floor or walls, as we find in some cases at Pompeii.

We now come to the distinctive feature of a Roman house, the hall, called the *atrium*, or *cavædium*. This was the central feature of the public division of the building, and the name of *cavædium* thus came to be applied sometimes, as a general term, for the portion to which access was commonly allowed, much as we say, now-a-days, "under my roof," to include every part of the house. The *atrium* was a collection of small rooms, forming a hollow square, with a court in the middle. It was a place of general resort, to which access was readily permitted. Here business was transacted, appointments made, and complaints heard. It was decorated with family portraits, or other paintings, and sculpture. Originally it was also the living and eating room of the family, but in later times separate apartments were appropriated to those purposes. The *atrium* then became a waiting-hall, and place of assemblage for clients and dependents, who passed much of their time in it, in attendance on their patrons. The *atrium* was, in fact, common to most Southern habitations of any importance. It is supposed that it was known to the Jews, and adopted by them during the time of the Roman conquest of Judea. St. Matthew tells us that St. Peter followed our Lord into the hall of the high priest, and this description would seem to point to an arrangement such as I have been describing.

Vitruvius attaches great importance to the *atrium*, or *cavædium*, and speaks of five different designs, as being in common use. Those are,—(1) the *Tuscan*; (2) the *Tetrastyle*; (3) the *Corinthian*; (4) the *Displuviatum*; and (5) the *Testudinatum*, or covered.

A few words may be given to the description of these varieties, which are shown on some of the diagrams.

The Tuscan *atrium* had its roof supported by four beams, crossing each other at right angles. The centre was open, and this was called the "*compluvium*." The roof, or rather the four roofs, covered the sides only, and sloped from the walls to the beams, being of the description known to us as lean-to roofs, such as you commonly see over the aisles of a church. The water from these roofs was conveyed into a shallow basin in the centre of the *atrium*, which was known as the "*impluvium*." This is the oldest and simplest type of *atrium* known, and is the form most common in Pompeii. It was an addition to Greek arrangements, for the *atrium* is believed to be a purely Roman invention. In the houses of the Greeks there was not the distinction between the public and private portions of the building which distinguished the Roman houses.

The next description is the *Tetrastyle*,—it is very similar to the Tuscan, but is adapted to larger dimensions by having columns placed at the right angles of the *impluvium*, to sustain the weight of the roof. It was only a step from this arrangement to a regular colonnade, which latter is called by Vitruvius the Corinthian *atrium*. Rows of columns surrounded the *impluvium*, which became a larger and more important feature, and this was the means of affording light and air to the various apartments placed around the *atrium*.

In all these types the roofs inclined inwards, and conducted the water towards the centre, which was occupied by the *impluvium*. There was, however, another arrangement known as the "*Displuviatum*," by which the water was directed outwards, and away from the centre. The *impluvium* was no longer necessary, and its place was supplied by fountains or sculpture. The last species of *atrium* is the *Testudinatum*, or that which was entirely covered. In this case the roofs sheltered the whole area within the four walls of the *atrium*. There was no open space or *compluvium* in the centre, nor was any *impluvium* necessary. Light was probably introduced by means of openings over the columns, after the manner of a clearstory, and it is evident that this mode of arranging the *atrium* is susceptible of a large amount of decorative architectural design, and is suitable for our own use in houses of importance.

The *tablinum* was an important feature of a Roman house. This was a room at one end of the *atrium* which was dedicated to images of ancestors, inscriptions in their honour, and pedigrees. The patricians prided themselves greatly on the contents of the *tablinum*, and the possession of one well filled with records of family honours was one of the recognised social distinctions of the day.

The rooms at the sides were called *alæ*. They were decorated in a similar way, and served as waiting-rooms, or sitting-rooms, or even as guest-chambers, in houses of moderate dimensions.

The space at the end of the *atrium*, between the latter and the private portion of the house,

and, indeed, the passages and corridors generally, were known as the *fauces*. There was commonly an altar in or near the atrium, dedicated to the lares, or household gods; the chamber in which these figures were placed was called the *lararium*, and sometimes served also as the *bibliotheca* or library. In some cases, where there was no space for an altar, a painting on the wall sufficed, and, indeed, the altar was a corruption of original simplicity; for, by the old laws of the Republic, the worship of the gods was only to be offered in the temples or sacred shrines.

Passing by the altar, we may now, by means of the *fauces*, leave the public portion of the building, and examine the more domestic apartments, where the family resided, and where are placed the eating-rooms, the bed-rooms, and the women's quarters, baths, &c.

The most striking feature here is the peristyle. This was an uncovered court, treated generally as a garden, and surrounded by colonnades. The rooms opened out of the peristyle just as we see still in the older Italian inns.

The bedrooms, or *cubiculæ*, around the peristyle had little in accordance with modern ideas of comfort. They were evidently resting-places only, and were little larger than a sleeping cabin of a ship, being commonly less than 10 ft. square. Bronze bedsteads have been found at Pompeii, and these were often arranged in alcoves, a common plan on the Continent to this day. The *cubiculæ* in the better kind of houses were sometimes approached by an ante-room, which served to shut them out from the open peristyle, and secured some sort of privacy. An eastern aspect was thought the best for the bed-rooms, so as to be exposed to the first rays of the sun, which were considered to be the most health giving.

The dining-room went by the name of *triclinium*, the title also of the couch in which the later Romans reclined at meals. The original name of the room was *diæta*, or *cœnaculum*, the latter being derived from *cœna*, already referred to as the chief meal of the day, which was taken between four and five in the afternoon. It was usual, for those who could afford the luxury, to have two or even more *triclinia*, suitable for the different seasons of the year. The Romans did not entertain large parties, nine being the maximum number that could be ordinarily accommodated with convenience. Great feasts, when given, were served in the atrium. Women did not ordinarily share in these hospitalities at the time of the destruction of Pompeii, though they were accustomed to sit at table until the time of the Cæsars, when the habit of reclining at meals became common.

The dining apartments were often highly decorated with paintings, and sculpture, the figures of Bacchus and the lares being among its ornaments. Among the very rich and luxurious arose various curious devices for adding zest to the pleasures of the table, and there are records that in some cases, rope-dancers performed their evolutions over the heads of the guests, a form of entertainment likely, one would think, to cause the latter some anxiety. In other cases, we read of movable platforms to be let down, at the proper time, with showers of perfumes and flowers. The *triclinia* were covered with quilts, more or less elaborately embroidered, and the guests reclined upon them, on three sides of a small central table, of wood or marble.

In connexion with the peristyle were the private sitting-rooms, or *œci*, which were in accordance with the style of the house. They were sometimes ornamented with columns after the manner of the *atrium*, but were, more ordinarily, of modest dimensions and decoration. A larger room, termed the *exedra*, served as a place of general resort, or conversation. There were also, in grand houses, a *pinacotheca*, or picture-gallery, and a separate *bibliotheca*, or library. The Romans were not a reading people, and very little has been discovered at Pompeii of a literary character. At Herculaneum, however, manuscripts have been found in considerable numbers. It is possible, therefore, that further researches at Pompeii may bring to light more information under this head.

Baths were not uncommon in good houses, and were fitted up occasionally with great luxury. They were placed in a retired corner, and were heated in the same manner as the public baths. In the house of Diomede, the ruins of the baths are very perfect, and enable us to understand the elaboration of this portion of the plan in the mansions of the wealthy. The baths have their own little court, with a colonnade, sometimes circular on plan; and grouped around this court are the various bathing chambers, constructed in general accordance with the arrangements, which I have already described in treating of the public baths.

The baths sometimes, though rarely, occupied a basement story. The slaves were also often placed here. Their quarters were called the *ergastulum*, and were little cared for, either as regarded convenience or healthiness.

We have seen that in the public division of the house, one altar was commonly dedicated to the gods. In the private division, and often in the most secret corner of it, was another oratory, or chapel. This was called the *sacrarium*, and was especially sacred to the particular divinity, often of a questionable character, to whom the family, or a part of it, was most attached. This little retreat was generally highly decorated.

Attached to the mansions there was in some cases a garden, or other uncovered space, for walking and exercise. This was called the *xystus*, and was planted with flowers and shrubs. There was also occasionally a room for tennis, or athletic exercises, called a *sphæristorium*, and another for games of chance, called an *aleatorium*. Several sets of dice have been found at Pompeii, and some of them unfairly loaded.

In the above description of a Roman house I have kept to the arrangements of town buildings, such as may be seen exemplified in Pompeii. For such features as are not common there we have the authority of the fragments of the plan of ancient Rome, now preserved in the museum of the Capitol. This plan, which is engraved on marble, is believed to have been executed about the time of the emperor Severus, and shows the style of the buildings erected both before and after the great fire, which occurred in the reign of Nero. Until that date no attention seems to have been paid to the means of preventing the spread of fire, but afterwards the buildings were laid out in isolated blocks. This plan is very interesting, as it shows an almost exact similarity between the domestic architecture of Rome and Pompeii, and we are thus able to assume that the latter forms the key to the former.

Country houses were, doubtless, far less uniform in their arrangements than those in towns, just as is the custom among ourselves. The *atrium* and public rooms were often much modified, or altogether dispensed with. At the same time, the disposition of the other parts of the house must have been essentially similar to those in towns, for the habits and manners of the people were the same in both.

We have now passed in review, though necessarily in a very imperfect manner, the chief buildings of Pompeii, and have been enabled to picture to ourselves something of the daily life of its inhabitants.

In treating of the temples of the gods we have seen how far the simplicity of manners had become corrupted to the weakening of the moral and religious character of society. Superstitious and debasing rites in the temples led only too naturally to the excitements of a licentious stage, and the savage cruelty of the amphitheatre. We have not found traces of a single building devoted to the relief of distress, whether of body or of mind. No hospital ever opened its haven of refuge to the sick poor, with a benevolence demanding but one passport for admittance,—namely, the existence of suffering and need. For such things, and for the principle which gives rise to them, we look in vain to the hard civilisation of Roman society. The spirit of Christianity had not yet arisen with healing in its wings.*

On the other hand, it must be confessed, that we have not found evidences of that wretchedness and extreme poverty which is always with us in our cities, and ever and anon appals us by its presence in the midst of our wealth and luxury,—a skeleton never absent from the feast.

If London were buried to-morrow, what sad contrasts would not the future excavator lay bare? Palaces in one quarter, hovels elsewhere not fit for the dwellings of the beasts that perish. But by the side of such sad revelations, he would also come upon hospitals, schools, almshouses, and the like, which would, we may hope, prove to him that there was a principle in the society of our day which was ever battling with evil, and which recognised, however defectively, the claims of sick and suffering humanity.

You will perhaps remember what I said to you in my first lecture on the great subject of providing healthy homes for the masses. Let it be the pride of architects to do their utmost to solve so important and difficult a question. They have already been represented in the battle. If the problem has now, to a great extent, passed from the hands of philanthropists into those of statesmen and men of business, no small share in that result is due to the untiring advocacy of at least one portion of the architectural press, which has unceasingly urged the claims of the poor, and has shown how sad and dark are those terrible "London Shadows" which exist side by side with the glitter and the wealth of this proud city. I cannot but hope that at some future day there may be no need to apologise for the difference, in this respect, between our great modern cities of Christendom and the heathen towns of Pompeii and Herculaneum.

We will now devote a few moments to the consideration of some matters of detail in the construction and decoration of the Pompeian houses.

There is not much for us to learn as to the first of these matters; the dimensions are so moderate, that there were few mechanical difficulties to be overcome, and no call on the ingenuity of the architect, excepting always as regarded the arrangement of his plan. The walls of the dwellings are, as a rule, badly built, with ill-burnt bricks and rubble, and owe much of their stability to the plaster with which they are encased, and which is of good quality. Some of the surfaces, indeed, are so hard and fine that they bear a polish, like scagliola, or our hardest cements. In such cases great care has been taken with the last or finishing coat, formed of sand, lime, and pounded marble. This was well rubbed down, and Vitruvius says the colours were laid on while it was wet, so that they became a part of the structure, like the more modern fresco, which was incorporated with the plaster, instead of being a mere surface application, like ordinary painting.

When we consider that almost the whole of the painting discovered at Pompeii was exposed to the action of climatic influences, its state of preservation is sufficient to prove that the Romans knew how to ensure that their work should be lasting.

The paintings at Pompeii vary greatly. Some are very beautiful, and display the influences of a Greek taste, if indeed they were not the work of Grecian artists. Others, on the contrary, are of a coarser character, both in design and execution, as might be expected in a small provincial town. You may see on the illustrations in front of me specimens of each of the different types of Pompeian decoration both of ceilings, walls, and floors. The custom most in vogue was to divide the walls into compartments, surmounted by ornamental borders. The divisions thus obtained were painted in brilliant colours, and decorated with a central subject, or sometimes a single figure.

There is often great freedom of drawing and elegance of treatment in these works, and it is clear that they appealed to an instructed love of the arts in the society of the day.

There is also a second style of decoration to be seen in Pompeii. This consists of the application of attenuated architectural forms to wall decoration. We find in it tall columns, so thin as to appear metallic, broken entablature, mouldings in confusion, and a medley of strange perspective and fantastic lines. Vitruvius speaks of this style of decoration only to condemn it in the strongest terms, as beneath the dignity of architecture, and altogether uninteresting to the mind. It has been suggested that as the attenuated architectural features were wholly inconsistent with solid stone or marble construction, and as they must have been suggested by existing architectural forms, they were probably taken from a style of building in iron or bronze, the traces of which have now been lost. It seems, however, somewhat improbable that if such a style was in common use, remains of it should not have been found. Numerous articles of bronze and other metals have been discovered in Pompeii, and among them candelabra which display the elongated columns common in the decoration to which I am alluding, but I am not aware that the excavations have brought to light any traces of a metallic architecture. Further evidence will therefore be necessary before we may safely conclude that the Romans used iron as a constructive material, as has been done in modern times, though we know that they employed it for ornaments and applied decoration, as in the case of the panels in the dome of the Pantheon, which have now disappeared.

* Although Pompeii was not destroyed until the year 79 of the Christian era, no traces of Christian influences have been discovered among the ruins.

The Roman floors were often very beautiful, as you may see from the specimens preserved in the museums of Europe, and particularly in the Louvre at Paris. They were made of cement in which fragments of marble were set, constituting mosaics. These existed in Pompeii in great variety, and some of the panels were very finely designed and executed. We have lately witnessed amongst ourselves a revival of this mode of constructing floors, the chief credit of which belongs, I believe, to the authorities at South Kensington.

The doors of the Pompeian houses were of wood. They were consequently destroyed, but their form and character can be distinctly traced. They had no hinges, but revolved on pivots, and must have made much noise when they were opened or shut. The creaking of a door was not objected to, however, as it was considered a proper mode of announcing the approach of a visitor, and thus served the same purpose as the modern bell. Iron chains and bolts were used at night for securing the doors.

It is known that there was glass in Pompeii, not only for domestic utensils, but also for use in windows. It was, however, rarely used, in consequence probably of its great cost. Some of the rooms in the public baths had glazed windows, and the glass was found in fragments when the building was first excavated. It is of good quality, and ground on one side to prevent persons outside from looking into the baths.

In the museum at Naples there are great quantities of glass bottles and other vessels of the same material, all of which were found at Pompeii, and we may feel confident that so clever a people as the Romans were could not have employed glass for such purposes, without perceiving its advantages for windows, when they wished to admit light, while excluding the external air. Indeed, during the later times of the Roman Empire, there is reason to believe that the walls of the great public baths were lined with glass, as well as marble, and even decorated with mirrors. In connexion with this subject it may be here stated that in addition to glass vessels, almost every conceivable household utensil has been found at Pompeii, and among them portable fireplaces, braziers, and contrivances for heating water.

In the houses generally there are no fireplaces or other permanent arrangements for warming, and it is difficult for us to understand how the people can have lived in health or comfort in these slight dwellings, with their courts uncovered and exposed to the vicissitudes of the climate, although the climate of the South of Italy. The latter is, of course, very different from our own; but in winter time the modern Neapolitan is glad to welcome the comforts of fire and warmth, which in northern countries are more constant necessities. Moreover, the climate is far from unvarying; there is sometimes a great amount of cold, and I have myself seen a fog at Naples which would have stood comparison with one on the banks of the Thames.

It is possible that the Romans were of a hardier and more enduring constitution than their descendants; but though this may, perhaps, have been the case in the Spartan-like days of the Republic, it can scarcely be contended for in respect of the later time, of which we have been treating.

From the general absence of warming arrangements in the houses, and the paucity of the portable contrivances that have been discovered, it is evident that, as a general rule, the Pompeian people lived without these comforts. This, moreover, was not because they knew nothing of them; for in their baths they had in actual practice an admirable method of heating rooms, which has often been thought worthy of imitation. Not only the floors, but the walls, and sometimes the roofs, were built hollow, and riddled with flues, into which hot air was conducted. By this means the whole of the apartment to be heated was surrounded by an envelope of warm air, which kept the inner surface of the room of a constant and uniform heat radiating in all directions. You will have noticed the small size of the rooms in the houses, and this may be connected with the fact of absence of artificial methods of heating them. The bedrooms, in particular, are very contracted, and without windows. The only possible access for fresh air, or egress for vitiated air, was the door, which opened into the atrium or the peristyle. The doorways were usually of good height, and may probably have been fitted with doors divided horizontally, after the manner of our stable doors in England. With these doors partly shut, and with a well-covered couch, it is possible that the sleeper might bid defiance to the cold; and it may be remembered that no less an authority than Miss Nightingale has declared that, except in cases of particular diseases, patients in a hospital may sleep with impunity in a room with windows open, in the coldest weather, provided that their beds are sufficiently covered.

It is possible, moreover, that temporary means of covering the open *atria* may have been resorted to. The *velarium* was the well-known contrivance for this purpose in the theatres, and there would be no difficulty in applying the same principle to the more easily managed dimensions of private houses. By this expedient, or even by movable shutters, the short-lived rigours of a Southern winter may have been conquered or evaded. In Malta, whose climate is not very different from that of Pompeii, such expedients are commonly used, and may probably have descended, with other traditions, from Classical times.

Another defect, to our eyes, in the arrangements of these Roman houses, is the utter want of privacy which they involve, according to our understanding of the term. Small rooms all round a central semi-public hall, or court, with no means of admitting light, save an open door, or a borrowed light over it, are certainly very far from our idea of domestic comfort. On entering one of these dwellings, such as, for example, the house of Pansa, the eye ranged freely over almost the whole of the building. Curtains were probably employed in winter, and when warmth or privacy was desired. At other times, the interior was open to view throughout, as shown in the drawing I have placed before you, and the effect of the vista, with its intermediate screens of columns, must have been very pleasing.

The Romans led far more of a public life than we do, and practised more uniformity and simplicity in their domestic customs. There was, therefore, a more constant surveillance of their private life, by the public opinion of their day, than modern feeling would tolerate. In the primitive days, any excess of luxury by a private person, however eminent, was repressed by opinion, and even by law; and from the manner in which the public were allowed access to the interior of private residences, no one could calculate on his habits escaping notice.

The men, at any rate, accepted this state of things, and contented themselves with securing a greater amount of privacy for their wives and families. The women's apartments, in a wing, or *gynæconitis*, were kept well apart from the rest of the house. In connexion with them were the kitchen and offices, often arranged round a court, after the usual plan. Here the ladies of the family might reside in something of the seclusion of an Eastern harem.

Having secured a quiet retreat for the female members of his family, the Roman was contented to live very much in public, and perhaps it is not always borne in mind that our present requirements of perfect domestic privacy are of very modern date. They were unknown in Mediæval times, and in the palaces of Italy and France the rooms often communicate with and through each other. The same idea of arrangement obtains in old English mansions, and it is not many years since a modern architect was employed to add separate passages of communication to the palatial mansion of Burghleigh, so as to prevent the necessity of passing through one room to reach another.

With us, the love of privacy may, perhaps, be carried to an extreme, so as to degenerate into selfishness and disregard of the public good. Public life is now more and more confined to a special class, and the rest live to a greater degree for themselves than was the case with the Romans. Excessive consideration for the luxuries of domestic life easily leads to forgetfulness of the demands of public duty or patriotism. What might not this London of ours become if some of the vast stores of public wealth were opened for its adornment or improvement, which are daily expended in evanescent show, and the costly baubles of fashion?

In considering Roman times and habits, we may pride ourselves, and pride ourselves justly, on improvement wrought by the influences of a higher sense of moral responsibility. May it not be possible, however, that something has been lost, and that our private virtues would lose nothing if more constantly associated with that care for the State which the public life of the Greeks and Romans was so well calculated to foster and develope?

To build a bridge, to give water to a city, to erect a great public work, might well add lustre to the proudest title, and secure for an honoured name the gratitude of millions yet unborn.

In their extended empire, in their love of justice, and in their Imperial qualities, the Romans were not, as we think, without resemblance to our own countrymen. At first, a simple, hardy, and rude nation of soldiers, they became first the conquerors of the world, and then enfeebled by the consequences of their own victories.

In their later times, a corruption of public and private virtue led to stagnation, decline, and fall. Power was used for unbridled excesses, and the very sports and amusements of the people were stained, as we have seen, by cruelty and bloodshed.

In these respects history is an open book for us. The softness of modern manners, to say nothing of higher influences, will never allow a recurrence to the grosser forms of Roman decadence. The danger is in a different direction, and may well become manifest when care for public duties may be obscured by the pursuit of private gain, and each considers it the duty of another to support and defend the State.

It is impossible to wander through the deserted streets of Pompeii without some such thoughts as these on the contrast between the present and the past. We can there picture to ourselves a life, unlike our own indeed, but still one in which all humanity can sympathise. We can study the habits of the people in their streets and temples; their law-courts, baths, and theatres; their shops and daily business; their games and amusements. To the architect the ruins around him will teach many a lesson, clear up many a mystery. By the general student an even more extended interest may be felt, for he knows that the worthiest object of study is Man, and will ever remember the words of the Preacher,—"*The thing that hath been, it is that which shall be; and that which is done is that which shall be done: and there is no new thing under the sun.*"

A BIRD'S EYE VIEW OF THE RAILWAY COMPANIES.

FURTHER LARGE OUTLAY ON EXTENSIONS.

THE conclusion of the half-yearly meetings of the several railway companies which have been held within the last few weeks enables us again to pass in review the operations of these various corporations during the half-year ending with December last, and also to give some particulars of the still further expenditure on new works during the current half-year, which a constant and steady increase of traffic renders necessary. A striking and favourable feature in the reports of all the companies is the large increase of traffic, and general development of the several undertakings, which makes the expenditure of an enormous amount of further capital on new lines and station buildings imperative.

The traffic of the *London and North-Western line*, during the half-year, amounted to 4,764,348*l.*, as compared with 4,645,499*l.* during the corresponding half-year of 1874, showing an increase of 118,849*l.* In addition to a very large outlay now being incurred on works in progress, the sum of 464,360*l.* was granted to be expended on other new works during the current half-year. Of this amount 118,000*l.* are for the enlargement of the Liverpool-road Goods Station at Manchester; 26,790*l.* for new carriage-sheds at Crewe; and 100,000*l.* for additional engines and carriages. Referring to some portions of the heaviest new works in course of construction, the engineer's report stated that the greater portion of the excavation has been removed from the ends of the new tunnel at Primrose-hill, and that of the total length of 1,180 yards of tunnel, 400 yards are finished. The widening of the line for four lines of rails, between Willesden and Bletchley, is finished as far as Tring, and the portion between Tring and Bletchley will be completed during the present month. An additional double line has also just been completed between Stafford and Crewe. Adverting to the very large extension of the Lime-street Station at Liverpool, the engineer states that 150,000 cubic yards of excavation have already been removed from the site, and the conversion of the tunnel between Lime-street and Brownlow-street into an open cutting has been commenced. The enlargement of the goods stations at Waterloo and Wapping, Liverpool, is nearly complete; and at Holyhead, the coffer-dam for the enlargement of the inner harbour is complete, and the

contractors have made every preparation to insure rapid progress with the excavation and masonry during the spring and summer. On the Betts-y-Coed and Festiniog line, one shaft of the Festiniog tunnel (3,872 yards in length) is sunk to the full depth of 190 ft., and the other two shafts, which are to be 417 ft. and 430 ft., are already to a depth of 309 ft. and 396 ft. respectively. For the extension of the Great Southern and Western Railway to the North Wall, Dublin, about 510,000 cubic yards of earthwork have been removed, leaving 60,000 cubic yards yet to be excavated. The ironwork for the bridge over the river Liffey is being fixed, and of the 750 yards of tunnel under Phœnix Park, 680 yards are finished. Contracts have just been entered into for widening the railway between Longsight and Ardwick, in Manchester, for six lines of rails; and also for the erection of a goods warehouse at Broad-street Station, London. Jointly with the Lancashire and Yorkshire Company, the company are about to expend 250,000*l.* on the rebuilding and enlargement of the Preston Station.

The proceedings at the meeting of the *Midland Company* showed that on the half-year's traffic there was an increase of 133,320*l.* as compared with the corresponding period of the previous half-year. The company expended during the past half-year 2,081,000*l.* on new works, and the further outlay on similar works for the current half-year was estimated at 1,650,000*l.* Of this sum 272,000*l.* are for the erection of new workshops at Derby. The chairman stated at the meeting that that costly building, the St. Pancras Hotel, was now completed, and that in a short time it would be fully opened for business. He added that the directors were satisfied, from their experience already, that it would not only pay a moderate interest on its outlay, but would also be largely conducive to the traffic on the line.

The *Great Northern Company's* traffic for the half-year also shows an increase, being 1,538,915*l.* against 1,493,953*l.* during the corresponding half-year of 1874. The report states that satisfactory progress has been made with the new Copenhagen Tunnel, near King's-cross, and that plans for the formation of an additional tunnel at Maiden-lane have been prepared by the engineer, and that the works will be commenced without delay. The directors state that the increasing business of the company necessitates further outlay from time to time for rolling stock, and at the meeting 92,615*l.* were granted for this purpose. The report also stated that on lines in course of construction in Nottinghamshire, Derbyshire, and Yorkshire, the expenditure during the half-year was 364,882*l.*, and it might be anticipated that this rate of expenditure would be continued, and, probably, slightly increased, until the company's engagements for the construction of new lines were completed. The total cost of these is estimated at 2,500,000*l.*

The traffic on the *South-Eastern line* during the half-year showed an increase of 52,000*l.* as compared with last year. The most interesting portion of the proceedings at the meeting of this company was the reference made to the proposals for improving the harbours of Folkestone and Boulogne. As regards the latter project, the chairman explained that they proposed to extend and improve the harbour of Boulogne, and the department of the French Government which had the control of all Government engineering had intimated their readiness to approve of a plan, which was simply a modification of their own, and should this plan be finally adopted he expected that a proposition would be made to the company to lend the Government of France a limited sum of money to improve the harbour: and he was ready to accept the security of the Government of France for a four per cent. guarantee. By getting the harbour opened they could secure, by the route of Folkestone and Boulogne, a large majority of the traffic between England and the Continent. Adverting to the improvement of the harbour of Folkestone, which had been strongly urged upon the board by several shareholders, the chairman said the question of improving the harbour of Folkestone was a matter of very great importance, but he thought it should only be done when they were perfectly sure and convinced that the funds would be forthcoming for improving the harbour of Boulogne. He thought they ought to continue to do all they could to get the harbour at Boulogne improved, and then, when they saw that was certain, to do something with respect to the harbour at Folkestone.

At the meeting of the *London, Brighton, and South Coast Company*, the chairman stated that the average annual increase of the traffic of the company during the last five years was seven per cent., the increase being about 120,000*l.* in each year. He predicted a continuous increase of traffic at the same rate for several years to come, observing that as long as London continued to grow and increase in wealth and population, Brighton and the other places upon their line were sure to grow also. When the business of a company increased by more than one-third in amount it was obvious that it could not be worked with the same capital as a small traffic. He then explained that the directors proposed to raise and expend a further capital of 600,000*l.* in new lines and other works, a proposal which was sanctioned by the shareholders.

At the meeting of the *Great Eastern Company* the directors reported an increase of traffic for the half-year, but only to a small extent, amounting to 13,055*l.* With regard to further expenditure, the chairman said that although they had expended a very large amount in doubling lines and the improvement of stations, they had yet a great deal more to do in that respect, and they should from time to time expend more money upon these improvements. With respect to the extensive works about to be carried out at the Bishopsgate-street station, he remarked that one of the objects in making the Liverpool-street Station was to provide accommodation for the goods traffic. They had a large space cleared at Bishopsgate, which would make, he believed, one of the best stations in London. It might not be the largest in point of area, but its position and contiguity to the business parts of the City, and its easy access to the docks, would undoubtedly make it one of the most convenient and valuable goods stations in the metropolis. In addition to the conversion of Bishopsgate Station they wanted also a number of new small stations, and for these purposes from 100,000*l.* to 150,000*l.* would be required. He added that the Continental traffic involved improved works, and a large new quay at Harwich, the construction of which the directors proposed to undertake. The meeting confirmed the proposal for the expenditure on the above-named works.

The report and proceedings at the meeting of the *London, Chatham, and Dover Company* disclosed the same increase of traffic during the past half-year which has characterised the different lines already named, the result of the half-year's working showing a receipt of 563,179*l.*, as compared with 542,915*l.* for the corresponding period of 1874. The report states that during the next two or three years it will be necessary to incur considerable additional expenditure in the provision of further accommodation and material for the growing traffic of the railway. The income of the company is now suffering from the want of such outlay. Extensions at several of the stations on the line have become indispensable, and to secure a punctual and efficient service, a large quantity of additional sidings at various points must be constructed. The chairman stated that the total estimated outlay for the proposed new works was 350,000*l.*, and the directors wished for power to raise 500,000*l.*, which the meeting granted.

The report submitted to the shareholders of the *Great Western Company* showed the receipts for the past half-year to be 2,918,546*l.*, as against 2,859,804*l.* for the corresponding period of 1874, increase 58,742*l.* The report also stated that the heading for the Severn tunnel had been driven to a distance of 667 yards from the shaft, and was now within 151 yards of the "shorts." The material was still the same hard and strong Pennant sandstone mentioned in the last report. The chairman stated that with regard to the heading there was nothing to cast any doubt on the success of the operation. The meeting sanctioned the expenditure, during the current half-year, of 246,185*l.*, in additional works and rolling stock, which included 33,000*l.* for new passenger stations at Cardiff and Swansea, and a new goods station at Bath; 10,000*l.* for the extension of carriage-shops at Swindon; 36,000*l.* for increased station accommodation at several towns and other places along the line; 6,000*l.* for new stables at Paddington; 3,000*l.* for a bridge under the line at Cardiff; and 2,375*l.* for refreshment-rooms at Westbourne-park station.

At the meeting of the *South-Western Company* the chairman stated that there had been a steady increase in the traffic, which was not to be attributed to any exceptional cause, but was a *bonâ fide* development of traffic. The revenue for the half-year showed an increase of 59,338*l.* over the corresponding half of 1874. The report detailed the progress made in the construction of new lines going forward in the neighbourhoods of Portsmouth, Southampton, Winchester, and other places, and stated that the Clapham Junction improvements were approaching completion. The chairman said an improvement was about to be carried out at Nine Elms, by diverting the rails southward, and taking in the engine-shed into the goods yard. The works had increased to such an extent that they had one part of the goods traffic on the south, and another on the north, which was inconvenient and expensive.

The reports and proceedings of the *Metropolitan* and *Metropolitan District Companies* showed that there was an increase in the traffic receipts of both lines for the half-year, as compared with 1874, the increase on the Metropolitan being 20,500*l.*, and on the Metropolitan District 19,761*l.* The chairman of the Metropolitan Company stated that the surplus estate brought in 55,000*l.* a year; and the report of the Metropolitan District Company stated that during the half-year the sum of 61,942*l.* had been received from the sale of surplus lands.

At the meeting of the *North London Company* it was stated that the fourth line into Broad-street Station was nearly ready for opening, and that during the half-year considerable progress had been made with the excavation and walling for the new dock at Poplar, which would cost 100,000*l.*

The chairman stated, at the meeting of the *East London Company*, that the line between Wapping and Liverpool-street was now almost completed, and was expected to be opened on the 5th of April. The company had paid the London and St. Katherine Docks Company 45,000*l.* penalties, in settlement, for the prolongued occupation of their property. The Dock Company originally claimed 141,200*l.*

The *Lancashire and Yorkshire Company's* report, and also that of the *Manchester and Sheffield Company*, show a large increase of traffic, and that of the former company details the progress being made in the construction of several new and costly lines in various districts in the two counties. The chairman of the company also stated that they were about to widen the line into the Exchange Station at Liverpool, and to enlarge that station, at a cost of 587,000*l.*

MOVEMENT IN INDIA.

ARRANGEMENTS are being made by the Government of India for a complete archæological survey of the whole country; and General Cunningham, who will be entrusted with the duty of conducting it, has issued a circular to the various local Governments, requesting information as to the origin or derivation of the names of noteworthy places, the date of their foundation, the extent of the ruins, the nature and colour of the materials used in building, the form, size, style, and ornamentation of each building, and its history and probable cost, with detailed plans and sections if possible. General Cunningham divides the archæological remains of India into two periods,—Hindu from B.C. 1000 to A.D. 1200, and Mahomedan from A.D. 1200 to 1750. Hindu architecture during the Mahomedan period is distinguished as Modern Brahmanic. The strictly Hindu period is divided into five groups, and the Mahomedan period into eight classes. The divisions of the Hindu period are, first, archaic, which comprises the earliest remains, funeral mounds, earthen barrows, cromlechs, monoliths, stone or bronze implements or weapons, and silver or copper "punch-marked" coins. This period extends from B.C. 1000 to B.C. 250, or from the age of Menu till after the Greek invasions. The second or Indo-Grecian period covers about 200 years, and includes such relics as the Asoka rock inscriptions. Next comes the Indo-Scythian, including the Buddhist cave monasteries and temples; then there is the Indo-Sassanian period of four centuries, terminating A.D. 700, and including some of the structural temples of Buddhist construction. Last of all is the Mediæval-Brahmanic. In the return made by the Madras Government attention is specially called to the ruins of the city of Vijianagar, which are situated on the south bank of the Thungabadra river, about thirty-six miles north-west of Bellary, and cover an area of nearly nine square miles. There are still in tolerable preservation some fine temples, elephant stables, the remains of a zenana, an arena

for wild-beast combats, and some large monolithic statues,—one of the god Siva, about 35 ft. high. A monolithic trough near the arena for watering the beasts measures 41 ft. by 3 ft. by 2 ft., and one of the temples contains a remarkable stone carving of a car and elephant, 30 ft. high. In General Cunningham's scheme of work he has divided the whole of India into five provinces of nearly equal size, and each of these again is divided into three sections, and each section is to form the work of one party for a year. At the same time, orders have been issued to prevent the indiscriminate destruction of ancient buildings, but this will not be easily accomplished unless special custodians are appointed. Meantime the Government itself does not display so much archæological zeal as we might expect when it propounds a scheme like this. A collection of 165 pieces of sculpture dug out from the ruined monasteries of the Peshawur valley, by General Cunningham, is lying in packing-cases at Lahore ready for despatch to Calcutta, but nobody seems willing to pay for their removal or to superintend their transport.

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In winter time, the following will be found a more reliable method. The sample of stone should be immersed in water of 15° C. (59° Fahr.) for twenty-four hours. When it is well soaked, it should be taken out, and exposed to a temperature of 4° to 8° C. (39° to 46° Fahr.). Then, every day pour boiling water upon it, three times a day. When this test has been repeated for four or five consecutive days, if it be found that the stone withstands all the changes of temperature to which it has been exposed, it may be pronounced of good quality in respect of its powers of resisting the action of frost.

THE NEW OPERA HOUSE AT BUDA-PEST.

THE want of a house for opera, which has hitherto found a home in the national theatre, has long been felt at Buda-Pest, but the execution of the plan was taken up in real earnest only recently. The Government took the first steps in 1873, by appointing a commission for carrying out the works. Previously the municipality had voted a sum of over 40,000*l*. for the purchase of a site, and a large sum for the works had besides accumulated, mostly through the liberality of the Emperor-King, who yearly provides most bountifully from his civil list for the promotion of art. Nikolaus Ybl, a native of Buda-Pest, from amongst six called upon to submit plans, was the architect chosen.

His building, in the Italian Renaissance style, has a pleasing appearance. The site chosen for it is the square known as the Herminenplatz. Its principal front will be in the Radialstrasse, an entirely new street, which, when finished, it is affirmed, will be one of the longest and straightest boulevards of any city. The carriage approach is at the principal front, while at the western front is that for the court, and at the east that for the administration. There are, besides, four entrances for the general public. In cases of fire, moreover, two other exits from the pit may be thrown open. Round the grand vestibule are grouped guard-rooms for military and police, rooms for the officer of the guard, superintendent of police, and surgeon, as well as money-takers' boxes and porters' room. There are two auxiliary flights of stairs besides the principal staircase. The auditory is calculated to contain 2,059 persons. The stage is over 120 ft. deep, 60 ft. being taken up by the proscenium, the width of the latter being 40 ft. The space adjoining the stage contains in five stories all the localities required in a large opera-house. In the cellars are heating apparatus, coal and wood stores, workshops for joiners, engineers, &c., dressing-rooms for "supers," work-room for engineer-in-chief, living-rooms for the fire brigade, &c. On a level with the street are dressing-rooms for the choirs, and two tuning-rooms for the musicians. The entire rear part is used as a store for the decorations. The dressing-rooms and foyers are in close proximity to the stage, and the first floor contains a fire-proof library and property-room; the second, the rooms for the administration; the third, rooms for the stage-managers and different officials, besides four rehearsal-rooms for the singers, and one for the ballet, another for general rehearsals, and so on; the fourth story contains the work-shops for the costumiers, and the store-rooms for the wardrobe and jewelry, armour and weapons, furniture, &c.; and the fifth, finally, a painters' fire-proof room, and a lift by means of which painted scenes may be let down at the back of the stage.

It should be added that great care has been bestowed on the subjects of ventilation, warming, and lighting, always surrounded with difficulties in a theatre, as well as the delicate question of acoustics. Great endeavours have likewise been made to protect the building against fire. It is intended to confine possible outbreaks of fire to the part where they originate by fire-proof walls, iron doors, and wire curtains.

The original estimate for the building was 200,000*l*., but it has since been raised to 300,000*l*., including the complete fitting up of the interior. It is expected that the building will soon be completed.

ART TREASURES EXHIBITION OF NORTH WALES AND THE ADJACENT COUNTIES.

THE proposed Exhibition at Wrexham in 1876, opening simultaneously with the Eisteddvod, and to remain on view for two months, is making good progress. Mr. William Chaffers is appointed superintendent and honorary secretary.

The object of the proposed exhibition of art treasures at Wrexham is to enable those persons who have not the facilities of inspecting the choice examples preserved in the mansions of the wealthy and intelligent nobility and gentry in this country an opportunity to study them under one roof, and bring them as it were to their very doors.

The aim of such an exhibition as is proposed should be to present to the working classes an opportunity of improving and cultivating the intellectual faculties of the mind, by observation and comparison, and moreover to arouse within them a sense of the refining and ennobling influence of art in all its branches, decorative, pictorial, or ornamental.

Arrangements will be made for the display of paintings and drawings by the old masters, illustrating as far as practicable the various Schools of Italy, Germany, Spain, Holland, Belgium, England, France, &c. In the English school it will be desirable to bring together the paintings of the great Welsh painter, Richard Wilson, whose works are much scattered, and the committee trust to the generosity of the possessors to consent to their being lent. Another portion of the building will be allotted to the works of modern artists.

The superintendent suggests the formation of a gallery of "Welsh worthies" as a distinguishing feature of the Exhibition, consisting of portraits of noble and illustrious persons born or resident in the Principality, and we hope this will be carried out.

Newhaven (N.B.) Harbour Improvements.—The work of improving Newhaven Harbour, which was projected some time ago, and for which powers were subsequently obtained by the Leith Dock Commission, has now been fairly commenced. The execution of it has been entrusted to Mr. Morrison, contractor, and a large staff of men will shortly be employed in the work. Preparatory operations have been completed, including the erection of extensive shedding, storehouses, office, forge, &c. A number of men are also at work, during both day and night tides, squaring and forming into a foundation the loose stones deposited by the fishermen about twelve years ago. This portion of the work will form, when completed, the western arm of the harbour. The pier will still be the protection from the easterly storms, but to render it more effective for this purpose, it is to be extended in a northerly and westerly direction over 100 ft.

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THE NEW OPERA HOUSE AT BUDA-PEST.

THE want of a house for opera, which has hitherto found a home in the national theatre, has long been felt at Buda-Pest, but the execution of the plan was taken up in real earnest only recently. The Government took the first steps in 1873, by appointing a commission for carrying out the works. Previously the municipality had voted a sum of over 40,000*l*. for the purchase of a site, and a large sum for the works had besides accumulated, mostly through the liberality of the Emperor-King, who yearly provides most bountifully from his civil list for the promotion of art. Nikolaus Ybl, a native of Buda-Pest, from amongst six called upon to submit plans, was the architect chosen.

His building, in the Italian Renaissance style, has a pleasing appearance. The site chosen for it is the square known as the Herminenplatz. Its principal front will be in the Radialstrasse, an entirely new street, which, when finished, it is affirmed, will be one of the longest and straightest boulevards of any city. The carriage approach is at the principal front, while at the western front is that for the court, and at the east that for the administration. There are, besides, four entrances for the general public. In cases of fire, moreover, two other exits from the pit may be thrown open. Round the grand vestibule are grouped guard-rooms for military and police, rooms for the officer of the guard, superintendent of police, and surgeon, as well as money-takers' boxes and porters' room. There are two auxiliary flights of stairs besides the principal staircase. The auditory is calculated to contain 2,059 persons. The stage is over 120 ft. deep, 60 ft. being taken up by the proscenium, the width of the latter being 40 ft. The space adjoining the stage contains in five stories all the localities required in a large opera-house. In the cellars are heating apparatus, coal and wood stores, workshops for joiners, engineers, &c., dressing-rooms for "supers," work-room for engineer-in-chief, living-rooms for the fire brigade, &c. On a level with the street are dressing-rooms for the choirs, and two tuning-rooms for the musicians. The entire rear part is used as a store for the decorations. The dressing-rooms and foyers are in close proximity to the stage, and the first floor contains a fire-proof library and property-room; the second, the rooms for the administration; the third, rooms for the stage-managers and different officials, besides four rehearsal-rooms for the singers, and one for the ballet, another for general rehearsals, and so on; the fourth story contains the workshops for the costumiers, and the store-rooms for the wardrobe and jewelry, armour and weapons, furniture, &c.; and the fifth, finally, a painters' fire-proof room, and a lift by means of which painted scenes may be let down at the back of the stage.

It should be added that great care has been bestowed on the subjects of ventilation, warming, and lighting, always surrounded with difficulties in a theatre, as well as the delicate question of acoustics. Great endeavours have likewise been made to protect the building against fire. It is intended to confine possible outbreaks of fire to the part where they originate by fire-proof walls, iron doors, and wire curtains.

The original estimate for the building was 200,000*l*., but it has since been raised to 300,000*l*., including the complete fitting up of the interior. It is expected that the building will soon be completed.

ART TREASURES EXHIBITION OF NORTH WALES AND THE ADJACENT COUNTIES.

THE proposed Exhibition at Wrexham in 1876, opening simultaneously with the Eisteddvod, and to remain on view for two months, is making good progress. Mr. William Chaffers is appointed superintendent and honorary secretary.

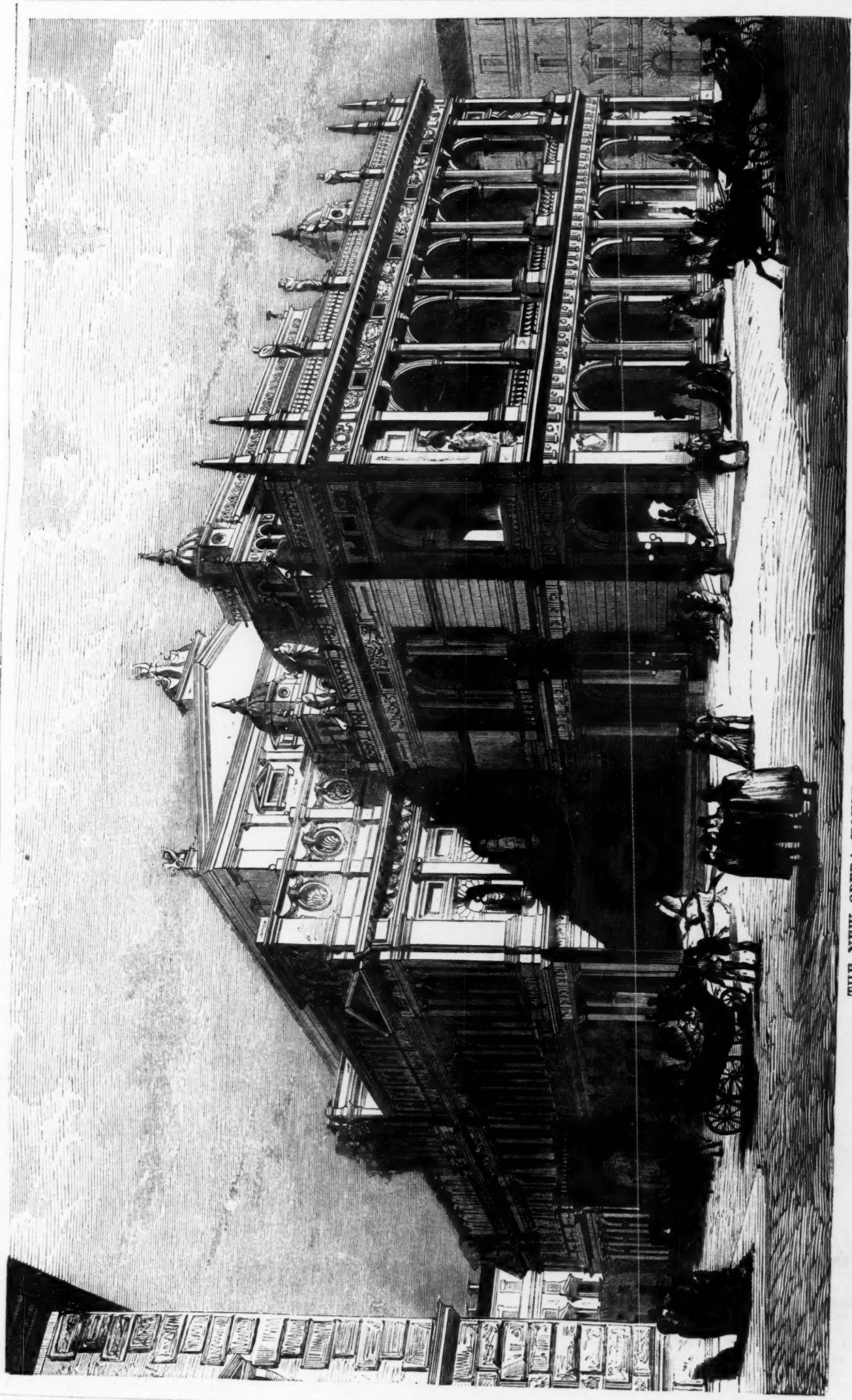
The object of the proposed exhibition of art treasures at Wrexham is to enable those persons who have not the facilities of inspecting the choice examples preserved in the mansions of the wealthy and intelligent nobility and gentry in this country an opportunity to study them under one roof, and bring them as it were to their very doors.

The aim of such an exhibition as is proposed should be to present to the working classes an opportunity of improving and cultivating the intellectual faculties of the mind, by observation and comparison, and moreover to arouse within them a sense of the refining and ennobling influence of art in all its branches, decorative, pictorial, or ornamental.

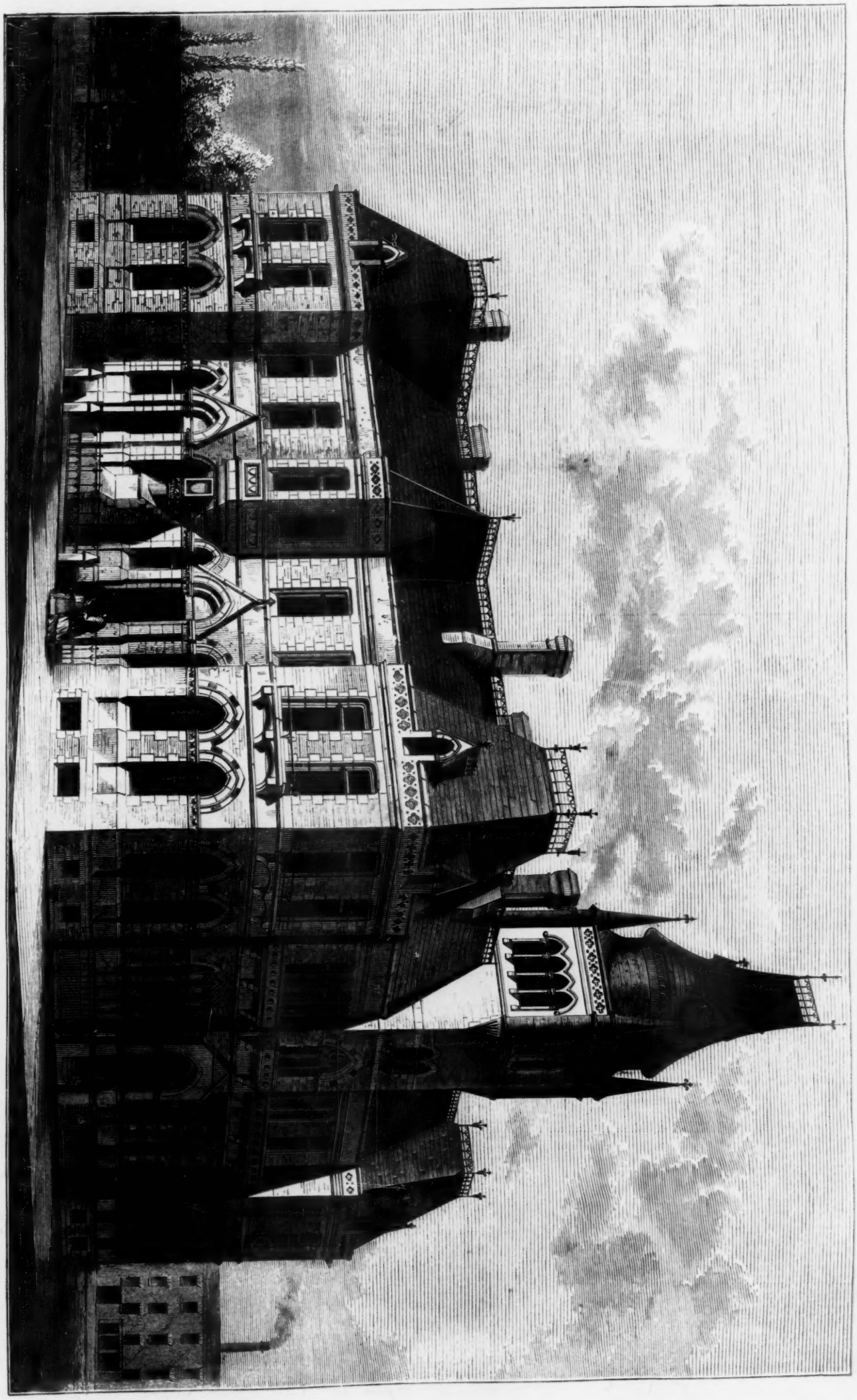
Arrangements will be made for the display of paintings and drawings by the old masters, illustrating as far as practicable the various Schools of Italy, Germany, Spain, Holland, Belgium, England, France, &c. In the English school it will be desirable to bring together the paintings of the great Welsh painter, Richard Wilson, whose works are much scattered, and the committee trust to the generosity of the possessors to consent to their being lent. Another portion of the building will be allotted to the works of modern artists.

The superintendent suggests the formation of a gallery of "Welsh worthies" as a distinguishing feature of the Exhibition, consisting of portraits of noble and illustrious persons born or resident in the Principality, and we hope this will be carried out.

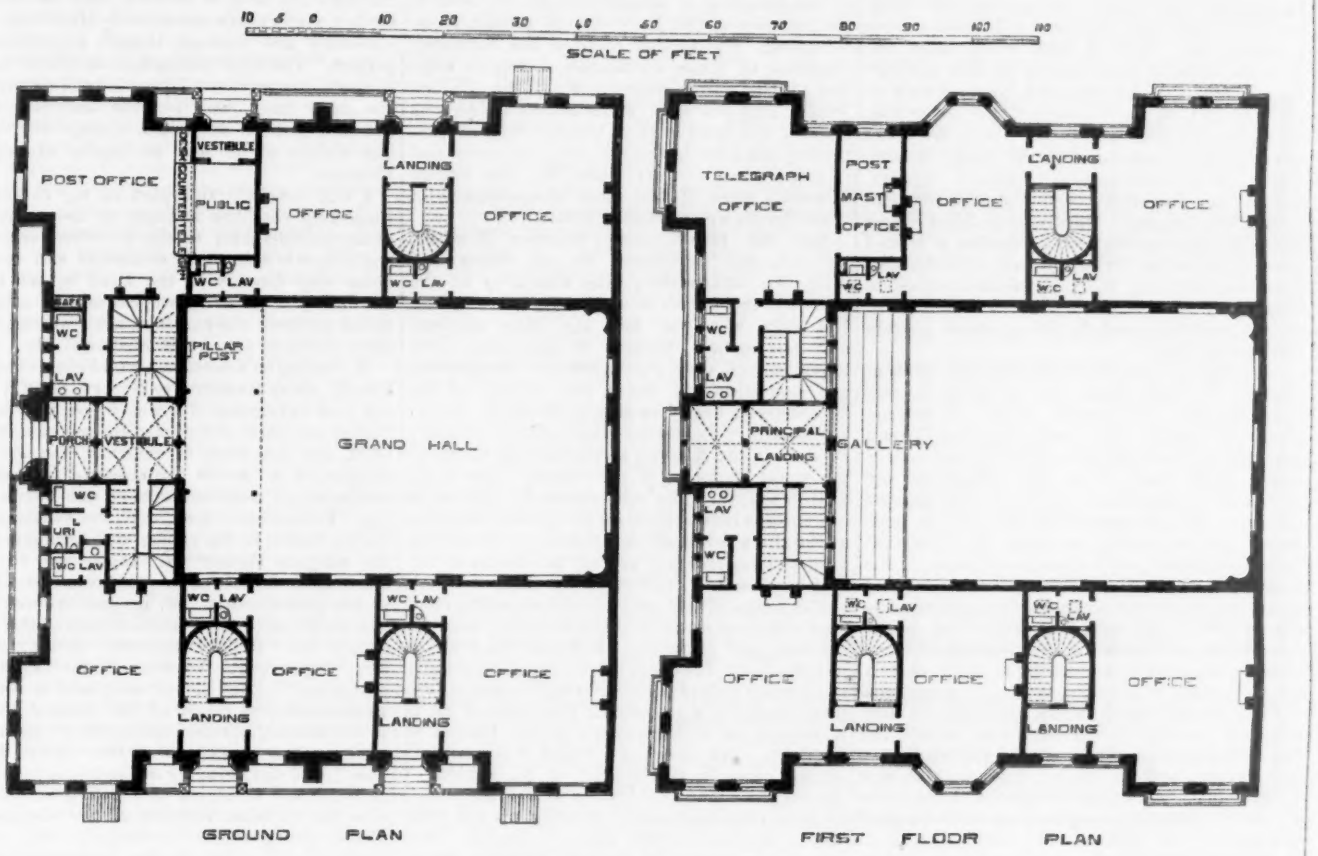
Newhaven (N.B.) Harbour Improvements.—The work of improving Newhaven Harbour, which was projected some time ago, and for which powers were subsequently obtained by the Leith Dock Commission, has now been fairly commenced. The execution of it has been entrusted to Mr. Morrison, contractor, and a large staff of men will shortly be employed in the work. Preparatory operations have been completed, including the erection of extensive shedding, storehouses, office, forge, &c. A number of men are also at work, during both day and night tides, squaring and forming into a foundation the loose stones deposited by the fishermen about twelve years ago. This portion of the work will form, when completed, the western arm of the harbour. The pier will still be the protection from the easterly storms, but to render it more effective for this purpose, it is to be extended in a northerly and westerly direction over 100 ft.



THE NEW OPERA HOUSE, BUDA-PEST.—HERR NIKOLAUS YBL, ARCHITECT.



HARTLEPOOL EXCHANGE.—MR. G. G. HOSKINS, ARCHITECT.



HARTLEPOOL EXCHANGE.

HARTLEPOOL EXCHANGE.

EARLY in 1872 the directors of the Hartlepool Exchange invited twelve local architects to submit designs. The selected one was by Mr. G. G. Hoskins, of Darlington.

The building has three principal fronts. The one on the north has a tower and angle-turret breaking the sky-line. The materials are red pressed brick, with stone dressings. The Post-office and the North-Eastern Bank have taken offices in the building.

THE STAINED WINDOWS OF FAIRFORD AND ALBERT DÜRER.*

IN the course of this paper, I propose to compare the chief outlines of these beautiful windows with some of the salient features of Dürer's character, and to show you that it is extremely probable that he designed the whole and executed a part of the paintings; in short, I hope to show that the authorship of that master is based upon sufficient evidence. I intend to take *an entirely independent course*, and to treat the question solely on its merits. When I began to study it, if I had any bias at all, the bias was rather against, than in favour of, the authorship of Dürer. It was the view of the evidence which led me gradually to the conclusion I now hold. Hence I think I may be fairly allowed to claim the love of truth—rather than enthusiasm for a favourite master—as the guiding star and light of my path, not less to-day, than in the past. In consequence, I shall ask you, to accept my conclusions, so far only as they are supported by the evidence.

Fairford is a quiet town of East Gloucestershire, pleasantly seated upon the banks of the Colne. According to Leland, the place "never florished afore the cumming of the Tames onto it." The church belongs for the most part to the period of Late Perpendicular; it has considerable interest in connexion with the noble families whose patrimony was the Honor of Gloucester, of which the manor of Fairford formed part. The date of the church has occasioned me some difficulty, but my researches on this head have not been wholly without fruit. Leland, the antiquary, visited Fairford in the year 1543. At folio 22 of his *MS. Itinerary* he says:—"John Tame began the fair new chirch of Fairforde, and Edmunde Tame finished it." This is good as far as it goes, but it is not very precise, for he does not tell us what Edmunde's share in the work was. Hence it appears to me that nothing very exact as to the date of the glass can be inferred from this passage of Leland. Anthony à Wood visited Fairford more than once; in the year 1678, he writes:—"This church may compare with any country church in England. The windows also, considering the time when set up (about 200 yeares agoe) may compare with severall cathedrals." [Wood's MSS., D. 11, fol. 23, Bodleian Library.]

In the MS. collections of Dr. Parsons, Chancellor of Gloucester, from 1669 to 1711, is the following statement:—"The church was dedicated to the Virgin Mary, Hen. VII., 1493."* This is the earliest mention of any exact date which I have been able to find, and I see no sufficient ground for rejecting this statement, especially as it agrees substantially with Anthony à Wood's account. The date of the windows—whether we accept or reject the story as to the capture at sea—would naturally fall about the same period, and if we may judge from internal evidence, the windows belong rather to the close of the fifteenth, than to the beginning of the sixteenth, century. This opinion has been formed both from a comparison of the armour and costumes with armour and costumes of the fifteenth and sixteenth centuries, and from a comparison with the glass at Nürnberg and Cologne. The windows were designed to form a single whole, complete in itself; hence, in my opinion, the plan must have been designed by a single mind, but that, probably, a master-mind.

One source of the symbolism therein developed was, as no doubt you are aware, a most interesting block book called the "Biblia Pauperum." Yet the plan is by no means a servile copy from the woodcuts of that book. The "Fall," and other types from the Old Testament, the "Life of the B. Virgin," "The Redemption," and "The Last Judgment," form the leading groups of the subjects. The windows exhibit much analogy to the pictures, both of the German and of the Early Flemish School. The reason is not far to seek. Dr. Waagen tells us that through Roger Van der Weyden the elder, the school of the Van Eycks pervaded all Germany. Hence the co-existence of Flemish style along with admitted German details, is, I contend, by no means inconsistent with the authorship of Dürer, the artistic descendant of Roger Van der Weyden.

The characteristic beauties admired by all writers, with more or less of enthusiasm for over two centuries past, may be summed up in a few words. There we see at work the originality and poetry of a master-mind, displaying itself in the scenes of the dire and dreadful doom,—scenes at once fantastic and terrible,—in the rich and vivid colouring, the life and action of the figures, in the tenderness and devotional feeling, *in the domestic character*, and, lastly, in the exquisite finish of the details, seen in many of the pictures. Along with these characteristics, the style of the glass is entirely Mediæval and Catholic, thus contrasting with many works even of the early part of the sixteenth century.

I proceed to the proofs I have promised to lay before you. To begin, there is no improbability upon the face of it to bar the claim of Dürer, for he is well known to have been *a universal genius*, who succeeded in whatever he undertook; and, besides, he was sometimes very hard pressed for money, as he tells us in his own words. Then, if we have independent testimony from several sources to the fact of his having not only designed, but also painted windows, in that case the authorship will be rendered so far probable. Again, if the Fairford windows can be shown to be not only of German origin, but if they can be traced unmistakably to Nürnberg, then the probability will evidently be increased. Lastly, if we can find there manifest resemblances of design, of composition, of detail, to Dürer's known works; moreover, if we can find there *certain marks, specially belonging to him*; then I contend that the authorship of that master is so extremely probable that for all practical purposes it may rank as a *moral certainty*.

Out of a mass of evidence I have collected on the question, I now proceed to offer you what I conceive is sufficient to prove what I have advanced. In the north aisle of Cologne Cathedral there are five very fine windows attributed to

* By Mr. J. Powell. Read at meeting of the Royal Archæological Institute.

* MSS. Rawl. Collections, B. 323, fol. 114.

Dürer. Now there is the closest analogy, both in subjects and in the arrangement of them, between those five windows and these under consideration. This I shall show later on. Winston himself bore witness to this analogy by the fact that he mentions consecutively at pp. 113–114 of his "Inquiry" the seven east windows of St. Lawrence, Nürnberg, those five windows at Cologne, and the Fairford windows. Again, he remarks on the "panelled arrangements" at Nürnberg, and "similar arrangements" at Cologne. Thirdly, at p. 263, Cologne and Fairford are mentioned together a second time. And in the first-mentioned work he shows that the similarity is by no means confined to the arrangement, but is manifest in the character of the paintings, and in the progress therein rendered evident.

Mr. Macray, in *Notes and Queries*, of September 19, 1868, gives the following extract from Gessert (a German writer on stained glass):—"Neither from any notices on Dürer's part, nor by his contemporaries, nor from modern works which treat of his life and art, can any certainty be arrived at that he actually painted on glass. That he was reckoned among the masters of our art appears, however, from this, that he experimented, with German industry, in the most varied branches of art, and therefore could scarcely have wholly abstained from glass-painting, which at his time was flourishing in its utmost glory. Besides, in the drawing of many glass-paintings, the unmistakable style of this master has led to the opinion that he completed them in all their parts, while, perhaps, he only supplied the *carton*,—an assistance which the most distinguished artists of that period did not disdain to give" (p. 135). The drift of this extract is to show that Gessert and others in Germany believe that Dürer at least designed windows.

M. Alexandre Lenoir, an authority in his day, having under his eye twenty windows from the desecrated church of the Temple in Paris, attributes them without hesitation to Dürer, in the following passage:—"These windows, designed and painted by Albert Dürer, are of very great beauty; they represent the most striking subjects in the life of Christ, from his birth to his death. A. Dürer, an artist born, put into this composition great energy and vivacity; the colouring is full of beauty and power; the drawing is correct, and the backgrounds are well arranged" ("Histoire de la Peinture sur Verre," pp. 28, 29). The same author also assigns to Dürer the windows at Passy, of which he possessed one, and remarking on its grand style and fine colouring, concludes that these also must have come from the designs of a great master. Lacroix, in his valuable work ("The Arts in the Middle Ages," pp. 264–266, English edition), confirms and developes the testimony of Lenoir as to the windows of the Temple, and adds:—"The celebrated German did not work alone, other artists assisted him; and notwithstanding the devastation which took place during the Revolution, in many a church and mansion traces of these skilful masters may still be found." In fine, the engraving of an English window, of the time of Henry VII., seen last summer, bore upon the face of it undoubted marks of a Dürer origin.

I now come to the German origin of the Fairford windows, which I think I shall be able to trace unmistakably to Nürnberg itself. Not only does Winston admit the "Germanic" character of the figures, but in regard to the "panelled arrangements" mentioned by him at Nürnberg and Cologne, he is a valuable witness, for you will see them in these photographs of the Fairford windows. These panels are very rich. The slender shafts on either side are sometimes diapered, sometimes filleted and beaded, sometimes adorned with fleurs-de-lys in sunk panels. Now those details you will see a little more prominently developed in the windows at Cologne.

To sum up, the architecture of the windows, wherein Romanesque and Gothic blend happily together, is, then, decidedly German, and neither English nor Flemish, as distinguished from German. More than this, the intersecting circular tracery is seen in great perfection over Wohlgemuth's altarpiece, in the Church of our Lady at Nürnberg; the serpentine crockets and finials may be found in stained glass in the German Museum and at the Church of St. Lawrence, in the same city. The interlacing tendril cusping seen at Fairford and Cologne bears the closest analogy to the well-known *Sacramenthauslein*, or Tabernacle of Adam Kraft, in St. Lawrence, and the foliated heads crowned by the octagonal or squared abacus, are seen in the churches of Our Lady and St. Sebald, all at Nürnberg. For further proof of the Nürnberg character of these accessories, I beg to refer you to the correspondence with Mr. Underwood. Any one may verify these statements without the trouble of a journey to that interesting city; for in the *Nürnberg Chronicle* and *Schatzbehalter* (to be found in the British Museum) some of the more characteristic of these details will be readily seen.

But the resemblances between Fairford, Cologne, and Nürnberg, by no means end with the architecture,—the similarity in the paintings themselves is very close and striking. Not only will you find the same subjects and the same manner of grouping them together, not only similarities of composition and similarities of detail, but certain of the figures are as nearly as may be identical, *Ex. gr.*: the angels at Fairford, Cologne, and Nürnberg; B. V. M. in the Nativity at Fairford and Cologne; the small Madonna in the tracery; the Goldsmith's tablets. The resemblances to Nürnberg are quite as remarkable, for the stained windows at the three principal churches there present the most striking points of analogy to Cologne on the one hand, and to Fairford on the other.

The limits of this paper forbid me citing more than one other example of the similarity between Fairford and Nürnberg. I found the peculiar treatment of the Fairford "Crucifixion," especially the angel and the demon receiving the souls of the penitent and the impenitent thief, first of all in a picture of Wohlgemuth's in the Chapel of St. John. But later on I found it actually, *in stained glass*, in the Church of St. Sebald. I regard the windows there and at St. Lawrence's as most valuable towards clearing up the question of the origin of the Fairford glass, for there we find examples of stained windows immediately preceding, of the exact period, and immediately succeeding, the Fairford windows.

The following is a detailed comparison of windows at Nürnberg with the Fairford windows and A. Dürer:—

St. Sebald's (beginning with north aisle of the choir).

Window III. is similar to Fairford in the rich crimson colour, in design and execution, and in the architectural ornamentation, such as filleted shafts, round-headed and Gothic arches, foliated and spreading capitals. Appears to be older than Fairford.

Window IV. is remarkably like Fairford in colours (crimson, green, and blue), and also (1) in composition, (2) execution, (3) details. The similarity of this window to the east window at Fairford is much more striking than of the Brussels "Crucifixion" (alluded to in 1868 by Rev. J. Fuller Russell) to the same. [We see there, *e.g.*, T-crosses; thieves bound to crosses of unworked wood with ropes; central figure nailed to cross of worked wood; angel and demon over penitent and impenitent thieves.] There can be no doubt that if the painter of Fairford and of this window was not the same he must have seen this, or some similar window or design.

Window VII. appears to be of the same date as Fairford. Figures of bishops similar to fathers of the church at Fairford. Similarity also extends to the mitres and copes, which are jewelled in the same manner, and the fingers of the hands are adorned with rings in both alike. This window (VII.) contains canopies similar to Fairford and Cologne,—a figure of St. Peter in the style of Wohlgemuth, and a figure of St. Paul similar to A. Dürer's St. Paul.

St. Lawrence's (north aisle of the choir).

Window I., apparently of the same date as Fairford, contains many resemblances of design and detail to Fairford, with architecture like Cologne windows.

Window II. Renaissance. In this window may be seen A. Dürer's "Adoration of the Trinity" (Christ on the Cross. See *Waagen*).

Window III. A most important window, for it contains the most clear and close resemblance in its architecture to Fairford.

Window IV., comes still closer to Fairford. Here is *the cruciform fleur-de-lys nimbus*, so prominent a feature of the former controversy. It has two different degrees of development, exactly similar to the same at Fairford.

Window VI. contains circular, ogival, and intersecting tracery, and other accessories similar to Fairford and Cologne (pointed out from tracing and photograph in two last instances).

Window X. comes nearest of all to Dürer. His influence here is evident; and, indeed, the modern restorations are actually after him. [An extremely fine window, though somewhat imperfect. The chief similarities to Dürer are in subjects, drapery, and fantastic tendencies. On the other hand, the peculiar architecture of Fairford is here surpassed, though the design and details of it are as nearly as possible *identical*.]

I will conclude this part of my subject by remarking that the analogy of these windows under consideration to the Nürnberg schools in the fifteenth century is evidenced and brought home very forcibly to the mind by the study, not merely of stained glass, but also by attention to the pictures, the carvings, the sculptures, and other works of art of that Mediæval city.

In coming to a most important class of proofs, namely, those attaching to Dürer himself, I must ask your indulgence if I weary you with details. One of my chief difficulties in preparation has been, not the want of evidence, but the vast amount of it: hence the absolute necessity of condensing it into the limits of one hour's reading. I commence, then, with the similarities of *design*, shown in the choice and arrangement of the subjects themselves. Dürer was too wise not to make use of the knowledge and experience of his predecessors. M. Berjeau expresely says that he followed the general outline of the woodcuts of the "Biblia Pauperum," in his "Ascension," "Entry into Jerusalem," and "Apotheosis of Christ." That Dürer engraved a series of woodcuts on the "Life of the Blessed Virgin" is well known. Hence I contend that the analogy between the symbolism of the "Biblia Pauperum" and the grouping of the subjects together in types and antitypes at Fairford, and the fact that the identical subjects of the windows are found among the acknowledged works of the master, both point to the probability of his authorship. The similarities of composition, or arrangement of the various figures of the pictures, form proofs of a more striking character than those we have just now touched upon. While on this part of my subject, I am compelled by the nature of the evidence itself to allude incidentally to Wohlgemuth (Dürer's master), as well as to Martin Schön (virtually his master, and actually his model). The similarities at Fairford to both these masters are undoubted. It is in the pictorial windows, as distinguished from the figure and canopy windows, that these similarities in composition are principally observable. And in regard to the subject of "The Last Judgment," in the west window, the resemblances of the demons there to the same figures in Martin Schön's St. Anthony, was pointed out by Mr. Scharf, in *Notes and Queries* (Sept. 26, 1868). But the fact that such resemblances exist is no bar to the claim of the disciple of both these masters, and the disciple who is known to have copied one, at least, of them rather *closely* in some of the best of his earlier works. But I shall not be satisfied with the mention of Wohlgemuth and Martin Schön, but will point out to you similarity to Dürer himself. In the first place, the pleasing backgrounds often seen through an open window of some old building, the fantastic tendencies, the prominent attitudes, the violent motives of executioners and other figures, which are such evident features of the glass, all belong to Dürer. Secondly, to come to facts, the "Annunciation," the "Nativity," the "Flight into Egypt," the "Crucifixion," the "Taking down from the Cross," the "Resurrection," the "Last Judgment," and the subjects of the life of the Blessed Virgin, are all more or less similar in treatment, to the same subjects in Dürer's acknowledged works. Out of all these I will take one for special comparison. The "Annunciation" is extremely similar. The Eternal Father in the clouds, with rays of light descending, the Holy Ghost represented by the dove, the Blessed Virgin kneeling and facing the spectator, the angel, a coarse figure in full garments, the canopy, and the lily, are all found at Fairford. The similarities in detail to Dürer's known works are very remarkable. The realistic tendencies of the Van Eycks, of Roger van der Weyden, of Martin Schön were, it is well known, carried to an extreme by Dürer, as may be seen by a glance at any two or three of his works. Now this *realism* is manifested very plainly in the Fairford windows, and, moreover, it is (in innumerable instances) found exemplified in the identical details. The minute execution of the leaves of trees and blades of grass, the stones upon the ground, the details of the landscape

backgrounds, such as winding streams, woods, gardens, and the buildings seen therein, are all examples of this tendency. The attention paid to articles of furniture, and the wonderful execution of the goldsmith's and jeweller's work, might also be cited, but of these I intend to speak later. Again, the introduction of the wheel-barrow into the Fairford "Inferno," and the coarse figures of the aged Simeon, of Nicodemus and Joseph of Arimathea, of St. Joseph in the "Flight into Egypt," and of numerous secular figures among the grisailles, may all be cited to prove the realistic character of the details. The execution of many of these grisaille figures, which are found in the small openings of the tracery, would do no discredit to the more mature eye and hand of Dürer. Of these I may mention a very beautiful little Madonna, now misplaced in the west window, St. Margaret with the Dragon, and the Angels bearing various instruments of the Passion. The full and flowing drapery of the angel Gabriel, and the angular breaks and the peculiar curves of the drapery generally, also proclaim the hand of Dürer. The *Tau*-shaped crosses, especially the three seen upon Mount Calvery in the background, in the "Taking down from the Cross," are also shown in Dürer's works. And to come to smaller matters, the chalices, the tablet of Moses, the harp of David, the portcullis, the turban, all present similarities, small if taken singly, but which, nevertheless, when united together add to *cumulative force of the argument*. Lastly, not only did Dürer often use a nimbus or glory, but I have actually found the Fairford *fleur-de-lys* nimbus (combined with the rayed glory more usually seen) *among his works in the British Museum*.

I come now to certain specialities which, I think you will allow, belong to Dürer, and to him alone. The first is the monogram, which you see is something more than an A. Now, not only does his later monogram, wherein the D is inscribed, often resemble A.T.D. (*e.g.*, the carrying of the Cross, G. Passion, the Knight and the Lady); but we know that he actually wrote his own and his father's name, Albert Thürer, and in allusion to the meaning of the word, he sometimes used a double door as the *rebus* for his name. Secondly, the initials A. D. are found in the belt of a persecutor in the clearstory. These letters are not initials, it may be objected. I admit that were this the only instance in which these letters are found, and were it the only proof of Dürer's hand, it might be objected to as insufficient. But these very letters of similar form are found twice in the Nürnberg *Schatzbehalter* of the year 1491, in the production of which there is every probability that young Dürer had a hand when he worked in the studio of Wohlgemuth, whose name appears in the book. The letters are found, as I have already pointed out in my letters to the papers, around the flower-pot containing the lily, the emblem of the Blessed Virgin. Subject,—the Annunciation. And then this is only one of many proofs of the master's hand.

Thirdly, there is a figure in a brown cap in the subject of the marriage of the Blessed Virgin, bearing great resemblance in the outline and the expression of the face to two of Dürer's portraits, taken by himself at the ages of thirteen and fifty. Two other figures also bear considerable resemblance to his own portraits. And the identical cap seen upon the head of the boy-artist of thirteen is found more than once repeated in the grisailles of the tracery (*e.g.*, in the window X. and I.). Now Dürer is known to have inserted his own portrait into his paintings, *e.g.*, he did so in this beautiful picture of the "Adoration of the Trinity." (See *Waagen.*) Hence I argue that all these figures furnish proof of Dürer's hand of a *very special kind*.

Lastly, there is found not only in the pictorial, but also in the figure and canopy windows, a remarkable profusion of goldsmith's and jeweller's work of admirable execution. Whether you study closely the subject of the "Queen of Sheba before Solomon," the "Assumption of the Blessed Virgin," the pearled caparisons of the horses in the window of the "Crucifixion," or the jewelled hands of the fathers of the Church, everywhere you will find the same profusion, the same taste in design, the same skill in execution. To what great master shall we look for all this, if not to the goldsmith's son, Albert Dürer, of Nürnberg? In fine, in the subject of the "Annunciation" is that very *tablet* which he adopted and made specially his own, the identical *mark* he must have *purposely* intended to distinguish *his handiwork*, for it is a *goldsmith's sign*.

At the risk of tiring out your patience, I propose now to reply to some of the chief objections which have been raised to the authorship. It has been urged that the windows, admittedly beautiful, yet show a want of "power," and an absence of correct drawing inconsistent with that authorship. But these objections can be readily answered. If there is such want of "power," how do we account for the encomiums passed upon these pictures by old writers and critics, from Anthony à Wood to Mr. Joyce and Mr. Jackson? Let us hear what Vandyck said about them. According to a MS. in the Bodleian*: "Sir Anthony Vandyck came to see Fairford windows, and told me the drawing was the work of A. Dürer." Hearne implies that King Charles I. came to see the windows with his gifted court painter, in these words:—"The most celebrated Sir A. Vandyck often affirmed to King Charles I. and others, that many of the figures were *so exquisitely well done* that they could not be exceeded by the best pencil."† These windows, you understand, are contended to be the outcome of Dürer's early work, when under thirty years of age. Now let us see if we cannot find some conventionally bad drawings in his works to set off against the same in the windows.‡ Indeed, the fact that the very defects of the master are found in the windows is a striking proof, in itself of no small weight. On examination of his works, we may find, in the first place, a great deal of conventional treatment derived from his predecessors,—a characteristic which shows itself, of course, more in his earlier works. Mrs. Heaton, in her "Life of Dürer," not only admits the faulty drawing and want of power visible in some of his works, but specially laments over his adherence to the conventional treatment of his predecessors in the "Last Judgment of the Little Passion," instead of giving us something more characteristic of his own inventive and original genius.

One of the chief defects of his earlier drawing is a defect of "foreshortening," that is, faces and other objects seen obliquely are more or less incorrectly drawn. [For proof, see his portrait of 1498,—hands and arm too large, also the nose giving the face an unnaturally wide appearance. A figure in the "Meeting of Joachim and Anne," St. Sigismund's.] He tells us himself that he made a journey to Bologna for improvement in perspective in 1506.§

I cannot close this paper without sketching a few of the chief outlines of the master's character, derived, on the one hand, from the best written sources, and, on the other, from a study of his works. Albert Dürer was born in Nürnberg in 1471, and died there 1528, thus living at a critical epoch,—an epoch of change and convulsion, for the Middle Ages ended during his life, and the Modern period began before his death. He was thus the bridge over the gulf separating the past from the present. In consequence, we find in his works three styles: the style of his predecessors, the style especially characterised by his own vigorous individuality, and the style adapted from the Italian masters.

Dürer possesses the poetry and originality of a true artist. Great power of imagination is one of his chief features, resulting in the terrible scenes of his "Apocalypse," as well as in the fantastic tendencies shown in his "Knight, Death, and the Devil." On the other hand, "the minute details of his execution bind him down to the earth." The exactitude of his copies from life place him in the foreground as the best type of German realism. "The expression he gives to joy, sorrow, and hatred, all seem to bear a manifest character of exaggeration. Upon the whole, however, *his beautiful colouring*, the skilful firmness of his drawing, his grand characteristics, his depth of thought, the poetry, often terrible, of his compositions, place him in the first rank of masters" [Michiels]. Again, although he fails in feeling for beauty and gracefulness of form, and his nude figures are often vulgar, and even ugly [Waagen], yet he shows in many works great tenderness and devotional character. He had a special attraction for *death* subjects and for *domestic* scenes, in which he is sure to portray exactly every article of furniture and other accessories of his subject, as witness his "Death of Our Lady," "Birth of St. John the Baptist," and others. The "Birth of Our Lady" exemplifies the same domestic scenes and accessories. A few words more and I have done. If you take the outlines I have drawn of Dürer's character and compare them with the sketch of the windows given above you will note some remarkable points of resemblance. I will, however, call attention to the "Taking down from the Cross," the demon behind the fiery grate, the Assumption, the figures of St. Peter and St. Michael, the devils and Hell of the west window, and many of the Virgins of the series, as subjects and figures calculated, on the one hand, to do credit to the artist, whoever he was, and on the other to exemplify the characteristics I have pointed out. To sum up, then, I think I have not only shown you the points of agreement between two sketches, I have pointed out a number of special marks which could not well have belonged to any man but Dürer himself. In other words, in cases of this kind, where direct documentary evidence of a fact is wanting, similarities of design, of composition, of detail,—above all, the presence of special marks known to belong to a master,—so much, but no more, is held to be sufficient proof of a master's hand, therefore it should be sufficient in this case. As an illustration of the nature of the argument, we may take the fact that the cumulative force of the evidence from the strata of rocks is held to be sufficient proof of the geological periods, even though direct documentary evidence is wanting.

* *Notes and Queries*, Jan. 23, 1869. Quoted by Sir T. Warrington.

† See Roper's "Life of Sir T. Moore."

‡ A tracing of a dove from the windows was compared with several doves, exhibiting drawing conventionally bad in Dürer's works.

§ Perspective includes "foreshortening."

THE RATING OF THE RAILWAYS IN THE METROPOLIS.

THE general assessment session just held has resulted in a considerable reduction having been made on the rating of several of the railways in respect of their lines and property within the metropolis, whilst, on the other hand, the rating of some of the great companies, more particularly in St. Pancras parish, has been largely increased. The rating of the South-Eastern Company in the parish of Woolwich has been reduced from 400*l.* to 340*l.*; in St. Martin's-in-the-fields, from 1,000*l.* to 500*l.*; and in Plumstead from 4,000*l.* to 1,792*l.* The London, Chatham, and Dover Company, who were rated by the Camberwell authorities at 2,150*l.*, have had this sum reduced to 1,250*l.* The North London Company, who were rated by the Poplar authorities at 180*l.*, have had it reduced to 120*l.*; in Bromley St. Leonard's, from 4,500*l.* to 4,000*l.*; whilst in the parish of St. Leonard's, Shoreditch, the rating of their line and buildings has been reduced from 30,052*l.* to 16,000*l.* The London and North Western Company, in respect of lines and buildings in the same parish, have had the rates reduced from 16,525*l.* to 9,048*l.*; and in Hampstead parish from 11,216*l.* to 8,250*l.* The rating of the property of the several leading lines in the parish of St. Pancras has been largely increased, the London and North-Western Company being now rated in that parish at 34,000*l.*, the increase in the assessment being 5,857*l.* The increase on additional buildings on the Midland line is 1,000*l.*, the rateable value of the Midland Grand Hotel alone being 3,500*l.* The rateable value of the Great Western Company's property in the parish has been fixed at 27,250*l.*, being an increase of 5,250*l.* The rating of the property of the Great Northern Company has also been largely increasing, the rateable value having been settled between the parties out of court. The property of the gas and water companies in St. Pancras parish has likewise been rated at a much higher amount than formerly. The rateable value of the Imperial Gas Company has been fixed at 25,000*l.*, increase 12,243*l.*, or nearly double its former amount. The New River Water Company, rateable value 15,220*l.*, increase 6,220*l.*; and West Middlesex Water Company, rateable value 2,500*l.*, increase 1,500*l.*, or about 75 per cent.

New Baths for Glasgow.—The directors of the Victoria Bath Company, Glasgow, have had under their consideration several competitive plans for the Swimming and Turkish Baths proposed to be erected in Butterbiggins-road, and, with professional assistance, have selected the designs furnished by Mr. T. L. Watson, which will, it is stated, be immediately carried into effect. The façade of the building will be two stories in height, with a projecting gable in the middle and octagonal oriels at each of the extreme angles, the style being of a Moorish or Oriental character. The cost is estimated at 8,000*l.*

HOUSES IN FLATS.

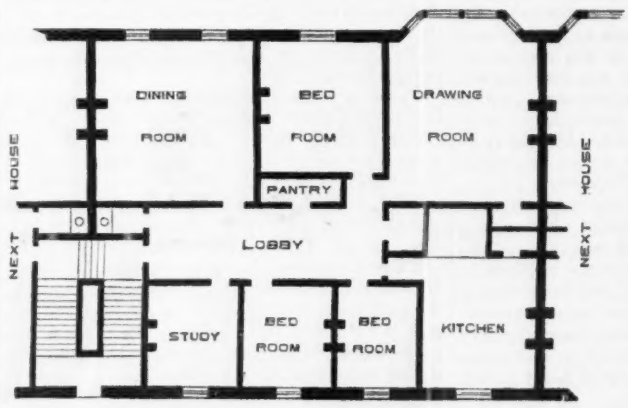
A TENANT'S RECOLLECTIONS.

IT has happened to the writer of these lines to live in various countries, and in houses of widely different construction,—from a single-storied cottage in the Scottish north, and a "shielin" in a Highland glen, to a Genoese-built mansion in Pera, and a pole-supported dwelling in the wilds of Roumania,—from an ever-so-many-ieth-ième in Paris, to a semi-detached villa in London; but at no time has he ever enjoyed so much cosy comfort in a dwelling as he experienced in a "flat" in the money-grubbing city of Glasgow; and, with the permission of the conductor of this journal, it gives him pleasure to bear this testimony, and to add this trifling contribution to the discussion respecting the comparative merits of the horizontally and vertically constructed house. Mr. White, in his able paper, has explained every detail of the Parisian residence, from cesspit and basement to attic and Mansard roof; but it has been made questionable in the discussion which has since followed, whether, among English, or at least London, builders, more is not known about the houses of Paris, Lyons, and Marseilles, than about those of Edinburgh, Glasgow, and Aberdeen. Such references as have been made to the Scottish house have been so peculiarly off-hand that they leave an impression of ignorance, and an ill-defined notion that those who mention the tall "lands" of old Edinburgh so glibly have never been further than the close-mouths, and know more of the reception-rooms than of the general internal economy of a Scottish city home. It is partly for this reason that these lines are written, and partly for the real pleasure of reviving a very pleasant period of life, for the student-time is generally among the happiest of all.

Our household was a very small one,—the professional father, the darling mother, the student son, and a sturdy serving-maid to wait upon us. Now this is just the kind of family for which little suitable provision is made, as we afterwards found when we had to expend twice the money to secure no greater convenience or comfort. But in Glasgow we had no difficulty in getting precisely what we wanted, and that where we wanted it. We watched the structure as it rose, for it was near our former dwelling, and, if need were, could even now vouch for its substantiality and the precautions which were taken to prevent damp. We saw a coating of asphalte laid on the foundations, as described by Mr. White; and we certainly did not observe that any mud or road-sweepings entered into the mortar, but only good lime and sand. There was no sunken or semi-sunken basement; but instead, the ground-floor was raised a couple of feet above the street level, and there were iron ventilating gratings to permit the free passage of air underneath. The house was one in a terrace composed of about twenty, and, the street being a retired one, there were no shops. Shops are rarely regarded with much favour by the Scottish householders who live above them. The shopkeeper is generally disposed to lay claim to a share of the back premises; he very often has a bad habit of stacking his shutters, if they are of wood, in some retired part of the "close," and the sweepings and rubbish from his shop accumulate very rapidly in the dust-bin or ash-pit. We were free from this nuisance, and on either side of our close-mouth, for we lived on the first-floor, there was what is locally known as a "self-contained house," and the dwellers in these had side-doors opening into the "close," and shared with us in the common privileges of the back yard. Moreover, they had little ornamental plots of shrubbery, of which we shared the greenness and the glory, while we had none of the trouble and expense. The city being Glasgow, the terrace was built of polished ashlar in front, it was three stories in height; and large bay windows ran up the whole three floors. Four families lived up each "close," but they were almost as independent of each other as four families are when living in juxta-position in the same street in London.

To begin with the "close" itself, which is the common means of communication, yet which does away with the necessity for the obnoxious *concierge*. Ours was fitted with a sturdy door, of which the balanced hinges were regularly oiled, and which by common consent was invariably kept shut to preserve us from "gangrel bodies," and dirty, and may be thievish, bodies as well. It must be admitted that sometimes a knavish message-boy did prop it back with a stone, and so leave us open to undersirable raids and incursions; but each member of our little community had a brazen latch-key, and the first incomer who found no necessity for his key indignantly kicked the obstruction into the street; while, on the other hand, the first outgoer would have similarly removed it as a duty which was due to his neighbours as well as to himself and those of his own household. Thus our seclusion was preserved, and most of those who wanted us had to "ring the bell." There were four handsome bell-pulls, two on either side of the street-door, with a space for a name-plate above each, and except that they were of the same *genus*, bearing no outward resemblance to the miniature bell-knobs of Soho. Each separate house-door had a bell-pull on one of its own door-posts, but it was rarely resorted to, and the street bell-pull, and an arrangement of chain and crank worked from each stair-head, and communicating with the heavy latch, was the real *concierge*.

The sisterhood of serving-maids had an agreement amongst themselves for cleansing the common thoroughfare, staircase, and outside steps, which gave satisfaction to everybody; and we had an agreement of our own about the lighting which answered all practical purposes. The landlord provided a lamp for the "close" itself, which was lighted and extinguished at sunset and sunrise by the public lamplighter. In addition to this, there was a bracket on each stair-head, between the house-doors, and this was connected with the meters of both houses by a couple of yards of ordinary tinned tubing. We fancied we saved money by this arrangement. The gas company would have charged us high for a small light which would have burned all night, whereas we had a big, clear fish-tail burner, which each house supplied weekly in rotation, keeping up the illumination to the good old Scotch hour of ten o'clock. If after that time, when Paterfamilias A went to bed, Paterfamilias B chose to stay out of doors, and wanted a light to discover the keyhole, he had only to leave instructions that it should be provided at his own expense, and could put it out when he came home. The following rough plan will give the best notion of the house itself.



The above representation does not pretend to be very accurate in its proportions; for this is only the recollection of a tenant, and words must compensate when artistic and technical skill fails.

To begin, then, with the lobby, it will be seen that, having no direct communication with the outside, it was of necessity somewhat dimly lighted; but it was not so dark as might be supposed. A great fan-light over the entrance-doorway always supplied twilight, and allowed all but very short-sighted persons to find their way about; and the upper panels of all the doors in the rear being filled with frosted glass, occasional glimpses even of sunshine penetrated, and there was usually plenty of light. A Cockney might think that too much space was devoted to this introductory department, for it was sufficiently large to hold a table, a big hatstand, and three or four chairs, and was not at all an unsuitable waiting-place for certain medium-class callers, and we never dubbed it the "Hall," but were content to term it, and to think of it only as the "lobby." In the darkest, coldest evenings of winter a stained-glass lantern in the centre was called into requisition for light, while a little gas stove in the cosy nook near the drawing-room door supplied the requisite heat, and destroyed any draughts which might have come to us from the outside staircase.

Passing round our little show, we come first to the "study." It must be admitted that although it was rather cramped with our tables and books of reference, and gave us no space to lounge and idle in, was sufficient to form a "den," both for the writer and the companionly *alter ego*, whose business it was in those days to supply pocket-money, college fees, and encouraging sympathy and affection. As stated, the city was Glasgow, and if we perverted a tolerable bedroom for a maiden into a diaphané-lighted and paper-encumbered "houf," we had only ourselves to blame. Yet, so queerly-constructed are mortals, that neither of us would perhaps desire a fairer final recollection of this world than that afforded by these few feet of lumber and love, and literature. At any rate, we never found it a bad study, and it would certainly have made a good bedroom. The next apartment, the chamber of the father and mother, would in London have been termed a commodious apartment by middle-class people. But in Scotland folks seem to be less easily contented with miniature rooms than they are in England. Parlours which merely permit their occupants to dodge round a little centre table would not be tolerated; and bedrooms which do not leave a good bit of floor space after accommodating a four-poster and a three-door wardrobe, with all the customary concomitants, give rise to grumbling. To say the truth, if we had a fault to find with our home, it was because these back-rooms were (as we then considered bedrooms) rather small. But having gained cosmopolitan experience, we should be disposed to murmur less in that old domicile. In it we enjoyed one advantage of the flat-system, for which we were not sufficiently grateful,—our bedrooms were all of the same height as the reception-rooms, namely, 13 ft., so that if we were circumscribed in our movements, we at least had plenty of air to breathe. The next bedroom was smaller still,—a place not to be incautiously entered in the dark for fear of banging up against something.

Leaving it without further comment we arrive at the kitchen. It was fitted with a roomy "dresser" and a deep plate-rack, which provided storage for the articles in common use. Crockery shone above, knives and napkins lay concealed in the drawers, and saucepans slumbered in the hidden gloom beneath, in the company of coal-scuttles and blacklead-brushes. In the corner, near the window, was the "coal-bunker,"—a formidable institution only to be spoken of with reverence. Our landlord must have liked a good fire, for prominent as the "bunker" generally is, this one out-Heroded Herod: 6 ft. high, and 4 ft. or 5 ft. square, when full it contained about a ton of coals; a mighty flap in front enabled its surface contents to be reached when it was half empty; and, if anybody cared to run the risk, there was a small sliding-door at the bottom, whence a shovelful might have been extracted without difficulty, or half a cartload might have been ejected on the snowy floor. The window-sill was fitted with a cast-iron "jaw-box," or sink, which was in turn supplied with pure Loch Katrine water by means of a swan-necked tap. (Since those days these leaky agents have been superseded by screw-down taps.) Outside the window, suspended on strong hinges, was a huge meat-safe, with perforated sides,—the property, be it remarked, of the landlord, and not of the tenant. High up on the walls were shelves, whereon rested those mysterious "clearing" things wherein Scotch servants take delight. There was the brazen "jelly-pan," which shone like the sun when the gas was lighted; and there, also, the brazen candlesticks and the glittering tin canisters, which were never known to produce anything useful. On the yellow-ochred walls themselves, interspersed with shining dish-covers, &c., were suspended mysterious leaden bas-reliefs of angels blowing trumpets, Napoleon crossing an impossible Alps, &c., which were kept in a state of surpassing brilliance, and appeared to afford much satisfaction to every Abigail who had charge of this little dominion. In a recess in the narrow section between the kitchen and the drawing-room was the servants' bed,—a box-bedstead let into the wall, with folding-doors to hide its existence during the daytime. Healthy? Perhaps not; but sanitary science was in its infancy in those days, and the box-bed is an

"institution" in Scotland. An English maid-servant must have a separate bedroom of some kind, though it be an attic or in a basement, just as she must have her beer. A Scottish girl does without either. The kitchen itself was well ventilated by fireplace, door, and window, and the comparative healthiness of a recess, say 7 ft. in length by 5 ft. breadth, and 9 ft. in height, in such an apartment, and a bed on a basement or attic is a matter of opinion. Above this recess, and reachable only by house-steps, was a "press," or cupboard, for the reception of the soiled household linen. It was an awkward place to get at, and it may be doubted if it was often put to its intended purpose. The box-bed only occupying the middle of the narrow slice taken out of the house between the kitchen and the drawing-room, the end parts of it were utilised as cupboards. The cupboard question is one of some moment in Scottish houses, but the thick stone walls give the architect an advantage for recesses which his English brother does not possess. Thus, in our dining-room we had two, which, with the fireplace, were sunk in the party-wall between our own and the next house. In the drawing-room there was one which penetrated half way through this same recess, and was met by another in the kitchen, while the other end contained a store-closet opening on the lobby. With all, the Mater occasionally grumbled on this head, as it is in feminine nature to do,—for even Eve was not content in Paradise,—but her grief was not deep, and she laughed with us when we laughed at her. There were other causes for complaint which were far more serious. The kitchen-range was none of the best, and when that is the case a Scotch housewife has a right to complain of her landlord. It is the only grate which he supplies, and he ought to make it a good one. In this particular the Scottish and English practices vary. The Scottish tenant on entering a new domicile finds every fireplace a yawning chasm which he has to fill up, and it is almost a certainty that the grates which he has transferred from his former residence will not fit. True, in Glasgow the ironworks are at the door, and grates are cheap, but they are most inconvenient articles to transport, and it would be far better if the English custom of supplying them as fixtures prevailed. Gasfittings might also be included in the same category, except in the public rooms. As it is, a "flittin'" is a horror which most men shirk in Scotland, because it involves cheerless half-lighted rooms during the transition period. It must also be borne in mind that Glasgow does not share in London's prejudice as to gas. There is a bracket in every bedroom there, and capital gas it is. Tastes differ as to gaseliers, and one man likes crystal whereas another prefers bronze; but the anti-gas prejudice being non-existent, it would not be too much to expect that plain bedroom brackets should always be supplied, and that the kitchen, at least, should invariably be fitted with range and jet, so that the discomfort which is unavoidable might not be intensified by needless difficulty in obtaining food, or the necessity for going to bed by candle-light. And now, to finish this fault-finding, we cross the lobby to the water-closet. It was a dismal hole, half-lighted by a little hole or window, placed high up in the wall, and usually kept open for purposes of ventilation. There can be no doubt that the water-closets are (or, at least, were in those days) the weakest place in the local system of house-building. There was no communication with the external air, and no means of ventilation, except by the little window opening on the staircase; therefore, if there was a draught from without it was almost certain that the air from the closet would find its way—perhaps imperceptibly but still surely—through the house. Added to this was the even more marked defect that the cistern from which the household water-supply was derived was not only situated immediately above the soil-pan, and open to any contamination which might arise from this source, but was directly connected with it or with the foul-drain tube by an open waste-pipe. That these were grave drawbacks there can be no doubt; but they were not beyond remedy. They were not peculiar to this particular house, but were common; but as a compensation for them the Glasgow landlord provides his tenant with both plunge and shower bath. In our case the fittings were exceptionally good, and the size unusually large; but the common artisan's dwelling of two or three rooms is rarely without its leaden plunge-bath, and the advantage from a sanitary point of view is enormous.

The reception-rooms do not require very particular mention; they not differing greatly, except perhaps in size, from similar rooms in an English house. After a dozen or a score of years a man forgets builder's measurements; but, at all events, our dining-room was big enough to permit the extension of an 18 ft. dining-table, of which the Pater was rather proud. Let us take it as 20 ft., and the drawing-room, inclusive of the broad bay-window, as 22 or 23 ft., both being of proportionate width. The cornices and centre-pieces for the gaseliers were very rich, and the painting in the one instance, and the paper-hanging in the other, all that could be desired. The mantelpieces were in the one case of black, and in the other of white, marble (not gimcrack affairs, but made of thick slabs), and the doors were fitted with finger-plates to harmonise with the knobs on the window-shutters and the bell-pulls. This, however, I am disposed to think was an exceptional kindness on the part of the landlord, for I remember we had spare finger-plates of our own, which had been used in our previous domicile. The room between these two was a spare bedroom, which enjoyed the distinction of being the guest-chamber solely because it had an outlook to the front, and was larger than the others. This was a Scotch flat in 1864, and the rental of it then was forty guineas, on a three years' lease.

A word about the premises in the rear. A distance of nearly 200 ft. separated ours from the next terrace. A narrow lane ran between the two, just wide enough for a cart to pass along and remove the contents of the ashpits as they became filled. The small portion of this intervening territory, which we shared in common with the other five families who had the use of our "close," contained a turfed bleaching-green, a common ashpit and two wash-houses. As a rule, only one wash-house would have been provided for such a number of families, and in all probability each family would have had the use of it for two days in rotation. The extra wash-house enabled each to claim a week, and gave opportunities for some interchange of civilities and goodfellowship among the servants in the way of "lendin' the key," when the institution was not in actual requisition. When it is added that the wash-houses were filled with tubs, furnished with hot and cold water taps, that the bleaching-green was furnished with drying-poles, and that the landlord's agents saw to it that all the lawns were trimly mown, and that the ash-pits were duly emptied, all has been said that need be stated. The description given is scrupulously accurate in every particular, and it has been rendered thus minute solely that each reader may judge for himself of the comparative advantages and disadvantages of the flat system as practised in Scotland.

HERALDRY IN ARCHITECTURE.

BELFAST ARCHITECTURAL ASSOCIATION.

AT a meeting of the above Association on the 28th of February, a paper was read by Mr. John Vinycombe on "The Science of Heraldry: its Relation to, and Uses in, Architecture in the Past and Present." The Rev. Dr. MacIlwaine presided.

Mr. Vinycombe said that in the eager pursuit of knowledge which characterised the present age, heraldry had not received the same attention by people generally as those subjects which lie more closely to their material interests and success in life: but to the student of antiquity, the archæologist, the architect, and the artist, it has ever been to the more thoughtful among them a most engrossing study. Connected as the subject was with history and antiquities, it gave a clue to the elucidation of much that was obscure, and with many of the distinctions which divided the people into classes, it had unquestionably been found serviceable as the means of marking that distinction. To signalise merit and preserve the memory of the illustrious were the useful purposes of this science, which would ever secure it from contempt, notwithstanding that the total change in the military system in which it flourished had tended greatly to lessen its necessity and importance. It presented itself at too many points not to secure from the thoughtful and inquiring the attention it deserved; it was a key to the interpretation of much in our literature. Spenser, Shakspeare, and the early poets abound in allusions to heraldic science, and to signs and symbols in general use expressible of well-understood ideas. Indeed, a book might be written about the heraldry of Shakspeare or of Spenser alone. Although the literature of this science was very voluminous, it was to most people what was called a very dry subject, as all such subjects were that required time and thought to understand them. Later writers had, however, done much, and there had now sprung up an ardent desire on all sides to become acquainted with the art and science of armoury. The lecturer proceeded to give an account of the progress of heraldry in England from the date of the Norman conquest, and showed how it was applied to architectural and armorial devices, to the illustrations in ecclesiastical and secular buildings, and also for the purposes of domestic decoration, and especially in its connexion with the science of military emblems, which it really was in the beginning. But, he said, it was not alone in its warlike aspect that heraldry might have a use to convey a meaning. "Peace has its victories far more renowned than war," and its triumphs and aspirations were as capable of being depicted by signs which preached a lesson as those pertaining exclusively to battles and bloodshed; and many persons who, while professing to despise heraldry, were not unfrequently the first to adopt its principles to record their achievements in the arts of peace. He proceeded to show who, according to heraldic authority, were entitled to bear arms. This turned upon the vexed question, "What is a gentleman?" The terms "gentle" and "noble" were formerly synonymous, and opposed to "ignoble" and "plebeian." All who were entitled to coat armour were included in the word "gentleman," but it was more particularly applied to the lowest ranks of these, because not having any honour or title, for want of a specific term it was necessary to employ the general one to distinguish them from the "ignoble." The origin of many of the honorary symbols used in coat armour had been preserved by tradition, but when this was wanting it was an interesting task to display their hidden meaning, and by comparison of the charges and tinctures, as the figures on the shield and colours were termed, to elucidate in a scientific manner their probable origin, and, while proving that "the gentle science of armoury" did not consist of mere arbitrary signs, but was based on philosophic principles, enable the bearer to hand down to posterity some reasonable account of his ancestral honours. Heraldic devices in architecture, decorations, and adornment were explained at considerable length by the aid of diagrams, and the lecturer then proceeded to show what was meant by a coat of arms—1st, the shield; 2nd, the crest; 3rd, the motto; in addition to which, but forming no integral part of the arms, was the helmet and mantling which were used to display the rank of the bearer. At considerable length and in minute detail Mr. Vinycombe explained the mysteries of heraldry, mantling, marshalling of arms, quartering, differences or marks of cadency, supporters, crests, the wreath on which the crest was placed, mottoes, impaling, blazoning, lines of partition, ordinaries, and the cross, with respect to which he said the adoption of the cross as an heraldic bearing had its origin, no doubt, at the time of the first crusade, and pilgrims took the cross as a badge or cognisance, not only in their pilgrimage, but afterwards, to perpetuate the memory of their piety and zeal. It was the ensign or banner in those holy, or rather unholy, wars against the infidels, from which they derived the name of Crusades. In the "Encyclopædia of Heraldry" 396 varieties of crosses were described and illustrated. The lecturer then went on to describe the different portions of the shield, the terms which distinguished its different parts, also the colours or tinctures, they being as significant as the charges or bearings. "Tricking," which was the marking out of the charges upon the shield in outline, was next referred to at great length, also the attitudes of animals, which had their positions blazoned; and the paper concluded with an extract from Barry's "Encyclopædia of Heraldry," in which it was said the privilege of using armorial ensigns was first limited and select; gradual encroachments were made, and at length the custom became so common as to impair the estimation in which heraldry had before been held. Every person, from the emperor to the mechanic, pretended to something of the kind, founded on real or fictitious claims. All trades, professions, or societies, ecclesiastical as well as temporal, assumed particular emblems, and these innumerable pretenders to armorial distinctions, even to the present day, coupled with the fact that the general bent of men's minds had long since been turned from the ideal to the useful, would sufficiently account for the decadence of heraldry and the decreased importance of family digni-

taries. Still, there were many who took pleasure in the study of heraldry, and cherish with pride the honourable emblems which distinguished their ancestors, and have descended undefiled to themselves. The art was undoubtedly valuable as an historical record; and although illustrious descent was but a stigma to a man of depraved character, yet to a respectable and virtuous member of society it might serve as a noble incentive, and the fact that his ancestors were noble and meritorious would add to the lustre of his own name.

Mr. Lindsey moved, and Mr. Lockwood seconded, a vote of thanks to the lecturer, which was passed unanimously.

THE PALACE OF LAEKEN.

BY order of his Majesty the King of the Belgians, important additions to the Palace of Laeken are in course of construction. This charming retreat is a modern mansion, dating only from 1782, when it was built to suit the Florentine taste of the Archduke Albert, then governor of the Low Countries. The site was admirably chosen, and a noble park surrounds the palace. The present improvements will consist of a monumental conservatory, and, according to the Queen's express desire, a new theatre will be built close at hand. Here some of the best actors and musicians who have won European renown will be invited to entertain the Court. From the conservatory a covered way, composed almost exclusively of glass, will lead across the park to a spot selected as the site of a future railway station; for if the King does not care to live in Brussels he will at least do his best to bring Brussels to Laeken. Guests at the Court will thus be able to walk under shelter from the station to the Palace, shaded by the orange-trees and rare plants to be placed within this gallery. Considering the marked preferences shown by the present and the late king for this rural retreat, it was necessary to organise a prompt means of communication with the capital. Laeken was also the favourite resort of Napoleon I. when the chances of war brought him to Belgium, and the fatal declaration of hostilities against Russia was dated from this palace.

CONSTITUTION-HILL AND THE KNIGHTSBRIDGE BARRACKS.

SIR, — Mr. Fergusson's suggestion under the above heading, given in your last number, ought to receive careful consideration from every one who feels interested in the possible improvement of two important points in the great thoroughfare of West London. His plan for relieving the pressure of traffic at Hyde Park Corner, and combining this practical gain with a new architectural effect at that point, seems to be the most simple and effective that has been proposed, and is in its main idea well worthy of its author's reputation as an original and thoughtful critic both on the practice and theory of architecture. In looking at the site with reference to Mr. Fergusson's plan, there are, however, I venture to think, one or two points open to consideration in regard to the effect of the whole, though not such as to be by any means insuperable objections to the general idea.

Mr. Fergusson refers to the very "lop-sided" look of the Wellington Arch when seen from the Grosvenor-place side, which would be removed by his scheme. This may be true; but at the same time the arch, as the roads are at present placed, has a definite purpose and meaning: it is the gate to the privileged drive of Constitution-hill, on which it confers a certain apparent dignity and exclusiveness; and its archway has a proper proportionate width to that of the drive to which it gives access. But suppose Mr. Fergusson's alteration carried out, and the Wellington Arch left as the centre object at the top of the proposed *place*. In order to make the scheme of practical avail for extending the space for traffic, of course the whole of the widened roadway or *place* below and on each side of the arch would have to be reduced to a uniform fall and a uniform level. We should then have the spectacle of a wide roadway of 50 ft. on each side, and in the centre a kind of triumphal arch plainly indicating that the centre was the path of honour, but with a central roadway a great deal narrower than the side ones, and leading to nothing, merely opening into the centre of a large space given over to general traffic. Thus, in one sense at any rate, the arch would lose its meaning, and Constitution-hill would lose some of its dignity, by the arrangement.

Another point in regard to the arch requires to be realised in imagining the effect of Mr. Fergusson's scheme. The upper part of Grosvenor-place falls rather rapidly from Piccadilly, and the new road at the east side of the arch, of course, would have to be the same fall. This would leave a great part of the basement of the arch "high and dry," so to speak, on the east, west, and south sides, and when seen from Grosvenor-place it would have the appearance of standing upon a heap in the middle of the roadway. Something like a flight of steps, or some additional architectural substructure, would be necessary to complete the effect, and prevent the whole structure appearing stilted and misproportioned from the south side. Steps across the south side, partially returned on the flanks to meet the slope of the ground, would be the best way, architecturally, of effecting this. Such a project would, of course, put an end to the use of the arch as a centre roadway at once, and make it a mere ornamental structure. Possibly this would really be the best way of treating it, as its apparent use and meaning would be gone when the line of Constitution-hill was diverted from it. If otherwise, and if the arch were retained as a roadway, then I certainly think it should be connected with the side thoroughfares by some such architectural screen as that of Hyde-Park gate opposite. This would make the archway only the centre portion of a large gateway erection, and would obviate the inconsequential effect which would be presented by a grand gateway spanning a middle thoroughfare that was never used, while the streams of traffic flowed on each side of it.

There is no doubt that Constitution-hill would be spoiled to a certain extent by Mr. Fergusson's scheme. It would not only lose its grand entrance, but also its effective sweep round at the top into Piccadilly, on a gentle but continuous rise. For this would be substituted a straight cut into Grosvenor-place, with a fall; a more rapid and ignominious fall than I think Mr. Fergusson has quite counted upon. On the other hand, the scheme would certainly secure, at a very moderate cost, a great convenience to public traffic, and, with certain modifications, a fine architectural effect. The new boundary line of the road, on the Green Park side, would be better if carried down in a straight line parallel with the hospital, till it reached the point opposite the end of Gloucester-crescent; a much more dignified and symmetrical effect would thus be obtained than by the sinuous line shown on Mr. Fergusson's plan, and the additional slice taken out of the Green Park to effect this would be quite insignificant: the boundary could then be turned with a good sweep round into the new end of Constitution-hill.

Mr. Fergusson's proposal for the rebuilding of the Knightsbridge barracks would certainly be an improvement on the preposterous idea (as it surely must be considered) of rebuilding them on the present narrow site, after still further reducing it by giving up a piece to the roadway. Every one must agree that a barrack building might very well be made to look more attractive than the motley assemblage of unpicturesque and mean-looking houses which would have to be got rid of to secure the site. But why suggest a scheme to render a little more palatable a proceeding which, in whatever form, is cordially disliked by all the public who have any good reasons to give? It is contrary to common sense and public opinion to rebuild the barracks at that point; and no one, beyond a certain section of military men, believes the idea of a strategical necessity for the position to be anything better than moonshine. The idea of making the building attractive involves, together with the purchase of the site recommended by Mr. Fergusson, a large outlay, to come out of public funds. Why incur this, when, if the barracks are once fairly removed from the neighbourhood, the demolition and rebuilding of the house property in question is a matter of almost absolute certainty, by private enterprise, within no very long period? The move for improving and raising the character of the neighbourhood is already begun in the large new houses nearly opposite the barracks; it is only the latter that stop the way; get rid of them, and before many years are out there will be a complete line of high-class buildings from the present site to Albert Gate. The present house property is bound to go in such a case; it is only a question of time, and it would certainly be no very wise economy to spend public money in acquiring it in the lump, only to perpetuate a military whim, which has nothing really to recommend it except the fact that the barracks always have stood there. The scheme would certainly be better than rebuilding them on their present site; but the game would not be worth the candle, and it is to be hoped that the pressure of public opinion may still prove strong enough to prevent any necessity for resorting to it.

H. H. STATHAM.

LIGHT AND COLOUR.

SIR,—If, as Mr. Benson states, artists as a rule are unacquainted with the sensational phase of the theory of light, the more imperatively is it demanded of any work designed for their instruction that that phase of the subject should be emphasised. And, in order that this less-regarded phase of the truth may be the more impressed upon the artists' minds, it is equally imperatively demanded that the language used in such a work should accurately and literally express the facts. Any work, therefore, especially addressed to artists on the subject of light, which fails in this respect, and which, *in the letter*, for the most part, attributes exteriority to light and colour, as Mr. Benson's treatises do, must be open to grave censure. For instance, take the following passages, from amongst many others, in his principles, &c.:—"But in general, a large part of the incident light *enters* the body, and of this part some of the *ingredients* are often more powerfully *absorbed*, and, therefore, sooner *extinguished* than the rest, so that after *traversing* a certain thickness, any of it *emerges* and *reaches the eye*, it is no longer of *the colour of the incident light*." "The variety of colours *in* natural objects illuminated by the same *white light of the sun*." Now I will ask of any one who really understands the subject, whether the expressions which I have underlined in the foregoing passages taken from Mr. Benson's treatises, are either calculated to impress upon the artist the sensational nature of light, or to assure the scientific reader that the writer himself comprehends that phase of the truth?

Again, the colour cube, on which Mr. Benson lays so much stress, especially when coupled with the expression "natural system," is anything but calculated to impress the student with the fact that colours have no exteriority, but, as undulations in matter, are simply sensations,—effects of a certain mode of motion on the nervous system. The colour cube may be a very good aid to memory, but it is as entirely a conventional thing as the square in the system of artificial memory, or the plan of associating either words or thoughts with certain corners of a room; the true natural system really being based, as I have shown, on the phenomena of sensation and the ocular spectra.

I have yet to learn that science should express itself in a language diametrically opposed to facts. Exact science has always demanded precise language. How is it, I would ask, if the exposition of the sensational phase of the theory of light has been so common, that not only artists, but even architects and the public in general, look upon any one who attempts to enunciate that doctrine as somewhat shaky in his attic story? The artistic mind generally seizes upon the salient principles of any subject; if, therefore, he is found wanting, not in possession of these, we may be sure that the teachers have been at fault. Who have been his teachers?

Your correspondent appears to me to have given himself very unnecessary trouble to restate what I have frequently stated, that Newton recognised the great fact that there is no light but to eyes, and no sound but to ears; though the physical hypothesis which he favoured was very different to that now accepted. "A New Theory of Light" would have been considered a presumptuous title, but a "Revised Theory" infers a reconsideration of what has been previously taught. He will, in my hypothesis of the Libration of Sensation, find that I have given an entirely new explanation of the phenomena of the ocular spectra, which I think will better bear the test of experiment than that which has been and is even now given.

In my next, sir, if you will still accord space for the further discussion of this very interesting subject, I propose showing that Mr. Benson's principle, "that all colours are combinations of three simple sensations," is an entirely erroneous statement of the sensational theory of colour.

W. C. T.

*** We will not refuse "W. C. T." space for one more communication. Mr. Benson may then reply on the whole, and with that the correspondence between these two gentlemen must end.

THE TREATMENT OF SCIENTIFIC ENGINEERING ARTISTICALLY.

IN the discussion which followed Professor Kerr's lecture on this subject at the Architectural Association, on the 3rd inst.,*

The Chairman (Mr. H. C. Boyes) said the greater part of the address was full of suggestions of great practical value; but, accepting the practicability of the greater part of the suggestions thrown out, he (the chairman) did not think it was at all conclusive that Classic was a style more suited than Gothic to architectural expression in engineering structures. He thought that the "first principles" of Pugin were just as applicable to the works of the engineer as to those of the architect, and that there should be no ornament about a work of engineering which was inconsistent with the purpose of the structure. The lecturer had contended for the preservation of the "anatomy" of engineering structures, but that was essentially a principle of Gothic rather than Classic work. His (the Chairman's) own impression was that the artistic treatment of engineering structures must be approached without any very marked predilections for either style, remembering that the principal object in view was to ornament the construction as gracefully as possible, consistently with its answering its true purpose.

Mr. Riddett, in moving a vote of thanks to Professor Kerr for his lecture, said he thought the lecturer had rather reduced the architect to the level of the *modiste;* for he absolutely claimed for the engineer the merit of creating the "skeleton," which was, in reality, but the groundwork of the form. Now he (the speaker) considered that, in its way, a naked girder was as beautiful as a naked human figure, and he did not think that any amount of piercing, gilding, or "tinkering," would improve it. Indeed, so far as girders so treated varied from their simplest expression, he thought they would vary from the true principles of beauty. He confessed that his sympathy would decidedly incline towards the engineer who had a preference for suspension bridges. For instance, he had an undisguised preference for the old Charing-cross suspension bridge as contrasted with the bridge which now spanned the river at Charing-cross.

Mr. R. Phené Spiers said he agreed with Mr. Riddett in deprecating any attempts to decorate engineers' structures with mere surface ornament. Such structures needed to be improved, if possible, in their outlines; any attempt to decorate the present unsightly forms would only tend to make them more hideous. It was to be regretted that so valuable a material as iron seemed of necessity, with regard to economy of construction, to assume forms which were so devoid of beauty. It was impossible to say whether science would continue to advance with the same rapidity which it had done during the past fifty years; but he could conceive of the possibility, and almost hope, that the time was not far distant when science would not make such rapid advances as it had done in the past—when, so to speak, it would reach the length of its tether, at all events in regard to constructive ironwork. When the period arrived when the ultimate capabilities of iron as a constructive material had been reached, engineers and architects would be able to devote more time to the artistic aspect of such structures, and then, perhaps, engineering works would begin to show some improvement æsthetically. One of the great disadvantages of the use of ironwork was its apparent insufficiency of strength and stability. He could hardly agree with the lecturer as to the desirability of dispensing with bridge-piers carried above the parapet line; they were often useful, not only in emphasising the structure, but in weighting it where weight was most wanted, serving, indeed, somewhat the same purpose as a pinnacle in a Gothic building. He had hoped that Professor Kerr would have pointed out how architects might reclaim to themselves some of the work which had now passed into the hands of the engineer. He certainly agreed with the Professor in thinking that bridges were specially within the domain of the architect, and their study would well repay attention. Indeed, the subject of bridge-building had been taken up abroad by architects with marked success. By taking up and thoroughly mastering the subject of bridge-building, architects would be likely to do much more good, and have much greater influence on engineering design, than by seeking to plaster the rude forms of engineers' structures with surface decoration.

Mr. G. W. Usill, C.E., thought that some of the remarks made by the lecturer would be conducive of a great deal of good to both architects and engineers; but the lecturer appeared to have lost sight of one or two important points. He seemed to have forgotten, for instance, that many of the works of the engineer were the result of emergency and expediency. Again, the Professor seemed to think that engineers were devoid of all æsthetic susceptibilities; but such a supposition was very far from being correct, for engineers, as a body, had a high appreciation of art, notwithstanding that constructive economy frequently necessitated their structures being far from sightly. One difficulty which the engineer had to encounter in rendering his structures more sightly than they generally were, was limitation in cost,—a limitation also felt by the architect, though in a less degree, owing to the comparative smallness of his works. He was sorry to say that works of engineering were retrogressing in cost, for while, in the days of Brunel, 40,000*l.* or 50,000*l.* was an ordinary price for a mile of railway, the average cost per mile in the present day was hardly ever more than 7,000*l.* This retrogression in cost necessarily implied less solidity of workmanship, and there was less opportunity than ever for introducing anything like artistic effect in engineering works. As an instance in point, an estimate was sent in not long ago for some waterworks, including a tank or reservoir in a conspicuous position. The designer had sought to make this tank somewhat of an architectural feature, at an extra outlay of perhaps 2,000*l.*; but when the directors became aware of this, the estimate was reduced by that amount. He must confess that it was his own opinion, and that of the majority of the engineering profession, that much of the gimcrack ornamentation and panelling, such as that suggested by the Professor, would be best omitted. At the same time, he quite agreed that there was ample scope for improvement in the design of engineering structures. With regard to roofs, Professor Kerr had passed some strictures upon the roof of the St. Pancras Station, the work of Mr. Barlow, an engineer; but he ought in all fairness to have compared with it the roof of the Royal Aquarium at Westminster, the work of an architect. With regard to Messrs. Jones & Gregory's plan for widening London Bridge, nine out of ten of the engineers with whom he (Mr. Usill) had had the opportunity of conversing on the subject, were unanimous in condemning it. With regard to Professor Kerr's remarks as to bridge-piers, would he supplant the noble columnar piers of Waterloo Bridge by any such treatment as that he had suggested? In conclusion, Mr. Usill said he was glad to say that there was a growing inclination on the part of engineers and architects to consult each other on their constructive specialities, and this interchange of advice and services would be productive of much good to both professions and to the public at large.

Mr. Robertson, in seconding the vote of thanks to the lecturer, said he thought his object had been somewhat misunderstood. It was not at all a question of glorifying one profession at the expense of the other. Mr. Usill had spoken of restricted cost as a disability pressing upon the engineer, but this was a disability which, if anything, pressed more unduly upon the architect than upon the engineer. Restriction in cost was not necessarily a bar to artistic effect; indeed, much of the most unsatisfactory architecture was due to injudicious expenditure.

The vote of thanks having been carried, the meeting terminated.

* See p. 235, *ante*.

HASTINGS WATER SUPPLY.

SIR,—As I see that, at *last*, an "Inhabitant" of Hastings has complained in your valuable paper of the state of the water supply to the town, and that the Mayor has contradicted his statement, permit me to give my independent account of the water supply as a "visitor." As regards my experience of the quality, the water is simply abominable. My reason for saying so is the result of my own personal observation. In August, 1873, I stopped at Hastings some weeks; also in 1874, and again in 1875; and each year in the best part of Hastings proper, where the houses and fittings are kept in good order. When I was there in 1873 my attention was called by one of my family to the contents of a quart decanter of water on the first day of my arrival. On holding the decanter up to the light, I could plainly see numerous insects (some of them one-twentieth part of an inch long) disporting themselves in the water, which was discoloured. If Dr. Frankland, who is so clever in discovering the minute "*living organisms*" in the London waters, had witnessed such a sight during his investigation, his report would have terrified every inhabitant of the metropolis. Knowing something about water supply to towns, I at once concluded that the cistern required cleaning; this was done without delay, but when the cistern was refilled the water was quite as bad, and even more discoloured. I then went to purchase a filter; and, on making some remarks about the water, the owner of the shop said he was connected with the management of the water supply, and that I must be mistaken. He requested that I would see the water as drawn from his cistern; I did so, and to his astonishment the water was discoloured, and contained the objectionable insects. I therefore got a charcoal filter, and had the water boiled first, giving directions to my family not on any account to drink the water without filtration.

While at Hastings that year I heard that the quality of the water was a general complaint. Having taken the necessary precautions, I looked upon the matter as one of the inconveniences that people have to put up with at the seaside; and though I was advised by several friends to write to the authorities or to the papers, I did neither, as I was taking a holiday, and had quite enough to do with the water-supply of London the rest of the year. Each summer since I have gone to Hastings, and the water was of the same quality, though last year it might have been slightly better. I shall go again this summer, but shall not omit to take my filter.

Now, I quite agree with the Mayor, that Hastings ought to be supplied with pure water; for it is quite consistent with the geological features of the locality that it should be so. I must say, that I did not inquire particularly as to the supply; I simply made observations as I strolled about the country round Hastings. I was struck with the great waste of money expended in the erection of useless works, scattered about on all sides of the town. There were numerous reservoirs, brick culverts, penstocks, &c., in the different valleys, the former all containing more or less sewage, and the latter apparently never used. For instance, there were two reservoirs near the Bohemia-road. Drainage from houses and surface-water from manured fields entered them; also there I saw a temporary engine pumping spring water from a well into one of them. The pure water should have gone direct to the town. Again, the reservoirs in the valley of "Old Roar" get a certain amount of sewage and land drainage; also the reservoirs in the "Ore" valley are open to the same objection. Again, at Fairlight Glen, the reservoir there is tainted, and what it was made for I do not understand.

I was told the water in these reservoirs was principally used for sanitary purposes, and that the water for domestic use was all taken from the well near the Gas Works. Again, I heard that when the well supply failed the reservoirs were used as an auxiliary supply. Of course I may have been misinformed, as I did not make any direct inquiry of the competent authorities, but I formed my own conclusions from the quality of the water as I found it. As I said before, nothing could be easier than to supply Hastings properly with pure water. The present large well being in the centre of the town is liable to get sewage contamination, particularly as it is situated in a valley where the natural drainage is at times dammed back by the rise of the sea, and the land drainage, and a portion of the sewers get charged with sea-water, notwithstanding the system of intercepting sewers draining to the east of the town. The pumping-station should be removed some miles from the town, and a larger covered reservoir constructed on the Castle-hill or another on the East-hill. Here all the mains should be disconnected from the various open drainage reservoirs and thoroughly scoured out and charged with pure water.

I must apologise for the length of my letter; but as the subject has already been discussed in your paper, I think it right that the matter should be well ventilated, both for the benefit of the "inhabitant" and also of the

VISITOR.

P.S.—I enclose my name and address, and you will suppose that I ought to know something about the supply of water to towns, though probably the mayor and the analytical chemist of Hastings will say that I know nothing about the supply of their town.*

RAMSGATE.

AFTER nine months' deliberation a committee of the Local Board of Ramsgate, appointed to consider the question of a marine drive connecting the East and West Cliffs, have made their report. The committee state that they have had the schemes of five engineers laid before them, all of which treat the subject in a different manner. Ramsgate, as many of our readers are aware, is cut in two by a valley, which forms the centre and business streets of the town; the existing roads to the Cliffs are tortuous and very steep; that to the East Cliff has a gradient of 1 in 8; that to the West Cliff 1 in 15. The inconvenience arising from these roads has been, and still is felt to be, very great, and must have retarded the extension of the town on both sides to a very considerable degree. The object of the committee was to inquire and report on the best means of constructing approaches to and connecting these cliffs. The committee having had models and plans explained by the engineers, came to the conclusion that the scheme designed by Mr. Ellice-Clark best met

* We may state that at a meeting of the Hastings town council, held on the 3rd inst., the Water Committee brought up the following report, which was unanimously adopted:—"The committee, taking into consideration the articles and letters which have lately appeared, and continue to appear, in certain papers, reflecting seriously on the water supply of this town, and the fact that the assertions made therein are groundless and untrue, recommend the council to appoint a committee, consisting of his Worship the Mayor, Aldermen Gausden and Croucher, and Councillors Brown and Ayers, for the purpose of drawing up a strong protest against, and denials to, these letters, &c., and get the same confirmed by medical men and analysis; and that such protest be made public through the press. Also that such committee have power to watch the interests of the town in this matter, and, if necessary, to direct such proceedings to be taken as may be deemed advisable."—ED.

the requirements of the town, and reported that he proposed to construct a roadway a chain wide, from the Granville Hotel to the highest point in Harbour-street, which is the principal street in the valley and chief business thoroughfare in the town. The question of cost was not gone into in detail, but it was ascertained that the probable cost to the town would be about 30,000*l*. If Ramsgate is to keep pace with the times and not sink to a mere sea-side resort of excursionists, her authorities must be up and doing.

AN ARCHITECT'S CLAIM.

ABRAHAM *v.* BETHELL.

THIS was a claim (heard in the Clerkenwell County County Court on the 2nd inst.) made by Mr. Henry Robert Abraham, architect and surveyor, 59, Tufnell Park-road, against Mr. Slingsby Bethell, clerk of Parliament, to recover the sum of 38*l*. for professional services.

The plaintiff stated that he was an architect and surveyor, and related by marriage to the defendant, who was one of the officials of the House of Lords. The defendant was about to take Portobello House at Mortlake, and wished him to go down in a professional way and examine the house. He surveyed the house and grounds; he also made inquiries, the result of which was that he advised the defendant not to take the house, and the defendant acted upon his advice. He afterwards went to Richmond and surveyed a house there, Spring-grove, which Mr. Bethell was about to take, and in consequence of his representations Mr. Bethell did not take it. He afterwards received a letter from the defendant, in which he stated that he had taken the lease of Tangier House, near Basingstoke, and asked him to go down and see it, and advise him as to plans for repairs, &c. He went down and made plans and sections of what was required, and he authorised him to employ some one to supply the warming apparatus. For these services he charged 38*l*., which was too cheap.

Mr. Alfred B. Friend, architect, said the charges made by Mr. Abraham were fair and reasonable, supposing the work was done in the usual way. On looking at the sketches of the plans as to Tangier House, he said they were done in the usual way.

It was submitted, on the part of the defendant, that the claim was made without the shadow of a right, and that the plaintiff gave his advice as a friend and relation, and at Tangier House while he was staying there as a visitor, and this was supported by the evidence given by the defendant.

Judgment for defendant, with costs.

BUILDERS' CLERKS' BENEVOLENT INSTITUTION.

AT the ninth annual general meeting of the above society, held February 29th, Mr. Benjamin Colls, president, in the chair,

The report stated that one additional pensioner had been elected since the last annual meeting, making a total of nine pensioners now on the funds, all of whom are widows. The income to the relief fund during the year was 194*l*., being in excess of that of the preceding year, but, with regard to the orphan fund, the total income of which for the year was 77*l*. 16s. 6d., although the amount of the annual subscription had been greater, the sum received in donations had been somewhat less, with, at the same time, an increase in the working expenses caused by the extra advertising, &c., in connexion with the passing of the new rules for working the orphan fund. The passing of these rules is the greatest event of interest in connexion with the Institution since its foundation by Mr. Thomas Peto Ward, in 1866, and it will be gratifying to the many friends who have taken an interest in the orphan fund to know that, in accordance with the new rules, the purchase of one life presentation was ordered at this meeting, the Institution selected being the Orphan Working School, Haverstock-hill.

The resignations of Mr. George Prestige as treasurer, and Mr. F. T. Mullett as secretary, were announced, Mr. H. T. Bayes consenting to fill the former, and Mr. H. J. Wheatley was appointed to fill the latter vacancy.

The services of the retiring President, Mr. George F. Trollope, were warmly acknowledged. A compliment was also paid to Mr. H. T. Bayes, to whom belongs the credit of preparing the new rules.

PAVING HARDSHIPS.

AT Hammersmith, Mr. Edmund Tattersall, residing at Coleherne-court, West Brompton, was summoned by Mr. Harding, clerk of the Kensington Vestry, for the sum of 288*l*. 18s. 2d., being the apportioned expenses assessed upon him in respect of paving works carried out in Redcliffe-gardens. Mr. A. Glen appeared in support of the summons, and Mr. F. A. Bosanquet for the defendant.

It appeared that the defendant's house stood in the Old Brompton-road. The side garden wall, abutting upon an old footpath known as Walnut-tree-walk, ran into the Fulham-road. During the improvements carried out on the Redcliffe estate, Walnut-tree-walk was converted into a road 50 ft. in width, and renamed Redcliffe-gardens.

Mr. Harding explained the position of the walk in respect to defendant's premises. He said that between the footpath and the wall there was an occupation-road leading into a field, but the Vestry had no control over it. That had now been paved, and the defendant was called upon to pay for it.

Mr. William Weaver, the Vestry's surveyor, said he had charged the defendant with the whole cost of the work done on his side, and with half the cost of the road. The pavement on the other side was laid down by the builders.

Mr. Bosanquet submitted that it was very hard upon the defendant, as he derived no benefit from the road. The whole of the expenses should have been apportioned among the different owners, and the defendant should not have been charged with the whole cost of his side.

Mr. Bridge said it was argued for the Kensington Vestry that it was part of the apportionment, as the other side of the road was paved. They had a right to apportion the expenses as they liked, and there were no means of reversing it. It was a case in which the expenses ought to have been made less, as he could not conceive one of greater hardship. A question arose whether the apportionment should have been made under the 105th section of the first Act or the 77th section of the second Act. If under the former, the duty of apportioning the expenses devolved upon the surveyor. The 77th section referred to land, and then it was a question for the vestry and not for the surveyor.

Mr. Bosanquet thought if the matter had been brought under the notice of the Vestry, they would not have charged in this way.

Mr. Harding said the Vestry had considered the matter and adopted the surveyor's apportionment.

The minutes were produced, showing that the apportionment was the surveyor's and not the Vestry's.

Mr. Bridge said he was bound by the 77th section, and as there was no evidence of an apportionment of the Vestry before him, he dismissed the summons.

*** Great injustice has been legally committed in numerous similar cases, sometimes amounting to the confiscation of a property. In the present instance, Mr. Tattersall's house and premises have been flanked for years by an old roadway used by the public, though, as asserted, never actually taken to by the parish, and now that it is paved he is called upon to pay a large sum of money for what is wholly for the benefit of the public, and of no use whatever to him.

TRADE DOINGS IN PARIS.

THE vast forest of timber work which forms the scaffolding for the reconstruction of the Hôtel de Ville now attracts great attention on the Rue Rivoli, which it skirts. It is the largest ever seen in Paris. It forms a quadrangle, and encloses a space 497 ft. by 427 ft., in which there are over 547 yards of scaffold platform. Its height, so far as may be judged by the portions now finished, is about 88 ft., and is flanked at the angles by square towers, which rise to about 120 ft. There are eight other towers for lifting purposes, which extend about 13 ft. or 14 ft. from the scaffold platforms. The work is proceeding briskly.

The contracts were let for the Salle des Pas-Perdus last week. The cost is entered at 79,520*l*., the mason's work alone costing 60,426*l*.

The contracts, also, of the Institute of the Christian Brethren in the Rue Oudinot have been let, and but for the wretched weather and the great rise in the waters of the Seine, which stops all foundation work, there would be considerable activity in the building trade in Paris just now.

EARLY GLASS.

SIR,—In reply to the letter of Mr. Ballantine, in your issue of last week, I should beg to offer one or two observations with the most extreme delicacy towards him. Mr. Ballantine says that troublous times have deprived us of any remains of the earliest examples of vitreous art. This I am prepared to totally deny. Should not Mr. Ballantine study abroad before he makes such a sweeping assertion as that which he has ventured to do in your paper? I would refer that gentleman to cathedrals of Seville, Milan, Bourges, Chartres, and Notre Dame de Paris. I trust you will find space to insert this in your next impression.

WILLIAM HENRY O'CONNOR.

Miscellanea.

Royal Italian Opera.—Mr. Gye, with unabated energy, is again to the fore, and announces that the opera season of 1876 will commence on Tuesday, March 28th, when "Guglielmo Tell" will be performed. He heads his list of engagements with Mdme. Adelina Patti, Mdlle. Zaré Thalberg, Mdlle. Emma Albani, Signor Nicolini, Signor Carpi, Signor Bolis, M. Capoul, Signor Graziani, M. Maurel, Signor Medica (his first appearance in London), and Signor Cotogni, and promises several "first appearances in England." In addition to a selection from the existing *répertoire*, it is intended that three at least of the following works shall be given:—Verdi's "Aïda," Wagner's "Tannhäuser," Donnizetti's "L'Elisir d'Amore," and Rossini's "Mosé in Egitto."

Proposed Baths and Winter Garden for Morecambe.—A project is on foot for erecting at Morecambe premises to comprise swimming and other baths, summer and winter gardens, aquarium, &c., and land for the purpose is said to have been already acquired. The site of the proposed building is to the north of the Midland Railway Station, and has a short frontage to the sea-promenade. It is proposed to erect in the first place a summer and winter garden, 170 ft. long by 70 ft. wide. This will front the sea. The building will be 50 ft. in height. The ground-floor will be used as a promenade, and around three sides at the height of 14 ft. from the floor will be galleries. At the south end will be an orchestra for concerts and musical entertainments. Underneath the gallery on the west side of the buildings is to be the aquarium, some of the largest tanks of which will be 20 ft. long, mostly arranged for the accommodation of deep-sea fish. Although this aquarium is to be so near the sea, the water will not be changed, but, by a system of circulation and aëration, will be kept in a healthy and clean state. In the rear of the building will be capacious swimming and other baths. The undertaking is to be carried out by a limited liability company. The construction of the baths will be proceeded with forthwith. Mr. John Waugh, of Bradford, is the engineer and architect.

Yorkshire Architectural Society.—The annual general meeting of this Society was held on the 7th inst., the Rev. Canon Eden in the chair. The Rev. G. Rowe, one of the honorary secretaries, read the 31st annual report, which showed that the Society was in a most flourishing condition, and that there was now a balance in the hands of the treasurer of 220*l*. 7s. 5d., as against 194*l*. 14s. last year. Three papers would be published in the official journal, two of which were to be read that day—one being "Architectural Notices from the Correction Books of the Archdeacon of York, from 1664 to 1700," by the Rev. C. B. Norcliffe, which, the report stated, unfolded a sad state of things in the churches of that day; the other, "On the Fresco Paintings in Easby Church, Richmond," by the Rev. G. Rowe. The third paper would be by the Rev. C. Lukis, and was "On the History and Restoration of Wath Church." The report then referred to a trip taken by the Society during the summer, to the progress being made with the restoration of the cathedral and a number of the churches of the city, and regretted the loss by death as members of Mr. Robert Davies, Mr. J. B. Atkinson, and Mr. J. Munby. The report was adopted, and several new members elected.

Demolition of the Old Colonial Office and Opening-out of Downing-street.—In a short time there will be a direct thoroughfare between Whitehall and St. James's Park, *viâ* Downing-street, which, at the west end, is at present a *cul de sac*, owing to the old Colonial Office occupying the site. The dilapidated old building will, however, be cleared away in a few days, the materials having been publicly sold on Monday last by Messrs. Horne, Eversfield, & Co., by order of her Majesty's Commissioners of Works. As that portion of Downing-street upon which the old Colonial Office buildings stand is on a much higher elevation than the open area immediately adjoining St. James's Park, the approach to the latter will be down a number of steps on the north side of the new Colonial Offices, uniform with those by which the park is at present approached from the India Office block.

Society of Engineers.—At a meeting of this society on the 6th inst., Mr. V. Pendred, president, in the chair, a paper was read by Mr. Perry F. Nursey on the Channel Railway. After referring to the public importance and utility of a means of direct railway communication between Great Britain and the Continent of Europe, and so of the East generally, the author pointed out that there were three main questions which had to be answered before effect could be given to the idea. The first was, could such a project be accomplished? the second, could the capital be raised? and the third, would the undertaking prove a commercial success? The reading of the paper was followed by a warm discussion on the merits of the Tube *versus* the Tunnel scheme, in which several leading engineers took part. The discussion was adjourned.

The Bolton Painters.—The operative painters of Bolton have decided, at a meeting of over 200 of their number, to persist in the demand for an advance in their wages of 1d. per hour, or 4s. 6d. a week.

Library Accommodation at South Kensington Museum.—In the House of Commons, on the 7th inst., Mr. Mundella asked the First Commissioner of Works whether it was true that the library accommodation at South Kensington is now totally inefficient for the large number of art readers who resort to it; and whether Government proposed during the present year to build a new library, which would also provide for the Dyce and Forster libraries recently left to the nation? Lord H. Lennox said he had reason to believe that the statement contained in the first part of the question was correct, and that the library accommodation was insufficient for the number of students. With reference to the latter part of the inquiry, he had not been able in the estimates for the year to include any sum to provide for the libraries referred to.

Society for the Encouragement of the Fine Arts.—On the 2nd inst. Mr. Daniel Grant delivered a lecture on "Characteristics in Art," Mr. J. Edmeston in the chair. The lecturer said that the essential basis of all art is the typical reproduction of the real. This reproduction becomes modified by climate, creed, and race, and thus puts on its special characteristics. In Assyria and Egypt in its fullest development it has created the highest forms of symbolism; in Greece it has created the exuberant and perfect form of physical life; in early Christian art it changes into a rendering of spiritual teaching under the form of asceticism, which became modified in its passage through the middle ages into the full growth of ecclesiasticism. It is not difficult to see that all these have faded, or are fading, and over them is arising the art of our own day,—the art of æsthetic realism.

Pig Iron as a Paving Material.—Twenty different kinds of paving have been tried in Paris: wood paving has been judged, gutta-percha paving is too dear, in bitumen paving there is room for improvement, and now paving by pig iron is to be tried. A bed of mortar is first laid down, which is covered by a strong layer of asphalte: it is in this layer that the iron cakes, which are about four centimètres thick, are set. These cakes, it appears, preserve the homogeneity of the bitumen, and prevent its depression, and render the asphalte less slippery for horses. This pavement will, it is thought, cost more than the compressed asphalte, but it is estimated that this mode of paving will save 50 per cent. upon the repairing expenses, which are very considerable.

Strike of Carpenters at Maryport.—For the last fortnight or three weeks the carpenters and shipwrights of Maryport, Cumberland, have been out on strike. The cause alleged by the workmen is that higher wages are given in neighbouring towns for shorter hours. It appears that at Workington and Whitehaven 30s. per week is paid for inside work, and 32s. for outside, on the nine-hours system; whereas at Maryport the wages are only 28s. for inside and 30s. for outside, for ten hours' work. It is alleged by the employers, on the other hand, that constant employment has been given the men all through the winter, while at the other places mentioned work has been very irregular. Many of the carpenters have left the town to seek work in other places.

The Vacant Spaces on the Albert Embankment.—The Lambeth Vestry have taken action on the reply forwarded to them by the Metropolitan Board of Works, to the effect that they were not able to accede to the request of the Vestry that the triangular piece of land on the Albert Embankment be left unbuilt upon. The Vestry are desirous that it should be left open as an ornamental piece of ground, and a resolution was passed that a request be made to the Metropolitan Board to inform the Vestry of the terms upon which they would dispose of the land in order that the parish might plant trees upon it, and maintain it at the cost of the Vestry.

Chester Archæological Society.—A meeting of the members of the Chester Architectural, Archæological, and Historic Society was held on the 6th inst., at the Albion Rooms, Chester, when the Dean of Chester gave an interesting address upon Roman altars, with special reference to the altar recently given to the Society, and which formerly belonged to the Rev. Mr. Prescott, of Stockport. Mr. Thomas Hughes, F.S.A., afterwards read a paper upon the modes of sepulture practised by the Romans and early Christians in Chester.

Extravagant Plumbers' Charges.—At the Hartlepool County Court, on the 3rd inst., the case of Bainbridge (plumber) *v.* Atley (shipbuilder), previously referred by the judge, for arbitration, to Mr. James Laidler, of Durham, was disposed of by the arbitrator's award. The claim was for 89*l.*, and was for work done and material supplied. The arbitrator found that after a careful examination and measurement of the work, the account put in by the plaintiff was 30*l.* 3*s.* in excess of the value of the work done and goods supplied, and the defendant was therefore entitled to have that amount deducted, the plaintiff to pay the costs of award.

Strike in the Newcastle Building Trade.—The strike in the Newcastle building trade has now commenced in reality. The stonemasons were idle the whole of the 6th inst., and the notice of the bricklayers expired on the 10th. The masons demand an increase from 34*s.* to 38*s.* a week, and the bricklayers demand an increase from 36*s.* to 40*s.* a week. The employers offered, as a compromise, an advance of 2*s.* a week, refusing, however, to make any alteration in the present arrangements as to piecework, or otherwise, or offered to submit the matter to arbitration. The men refused these overtures.

Raffaelle and the Dresden Madonna.—Mr. F. G. Prange recently read a paper before the Liverpool Art Club on the "Sixtine Madonna." The introductory remarks dwell on the uncertainty of the causes which render the events of one age memorable and praiseworthy in the estimation of succeeding generations. Augustus III. of Saxony committed great mistakes as a politician, but has secured the gratitude of posterity by his acquisition of Raffaelle's masterpiece, together with that of Holbein—the one, as Mr. Prange says, "the highest expression of Catholic, and the other the tenderest and most beautiful interpretation of Protestant feeling."

Hayle Foundry Wharf, Nine Elms.—This extensive freehold, of nearly an acre of land, and large engineering works thereon, situated on the bank of the Thames, was put up for sale by auction, at the Mart, on the 8th inst. After a spirited contest, the "lot" was knocked down to Messrs. H. Young & Co., for 13,500*l.* We learn it is Messrs. Young's intention to work this factory as well as their present establishment, the Eccleston Iron Works.

The Bradford Painters.—At the annual meeting of the master painters of Bradford, held on the 1st inst., the question of the differences between them and their workmen was discussed, and the offer of the men to refer the whole question to arbitration on the basis of the position at the time of the meeting of the deputies of both associations on the 7th of January, was considered. It was decided that the masters should go to arbitration only on the questions discussed at the mutual conference on the 7th of January.

Water Supply at Edinburgh.—The Edinburgh Water Trust on the 9th inst. agreed to accept an offer for the construction of a reservoir and other works at Alnwick-hill, at a cost of 54,000*l.* There was also under the consideration of the Trust a motion by Bailie Cranston, proposing that a clause be inserted in the Bill now before Parliament providing that houses under 8*l.* rental be rated for water in the same way as larger houses, but this proposal was negatived by a large majority.

Memorial of Sir Christopher Wren.—The parish church of East Knoyle (the birth-place of Sir Christopher Wren) is now in course of restoration, and it is proposed to insert in the chancel a stained-glass window to the memory of Sir Christopher Wren, no other monument having hitherto been erected at East Knoyle for that purpose. The Rev. R. N. Milford, rector of East Knoyle, will be glad to receive subscriptions in aid of this object.

Costumes at the Alexandra Palace.—After Easter prizes will be awarded by the Alexandra Palace Company and a Committee for the best designs in ladies' costumes, the decisions being based upon the originality, elegance, and economy of the dresses displayed.

St. Pancras.—We regret to hear of the death, on the 14th inst., of Mr. Richard Richardson, confidential assistant for the past nineteen years of Mr. Henry Baker, the district surveyor.

Linlithgow Palace.—At the meeting of the Linlithgow Town Council on the 7th inst., it was resolved "That the Magistrates and Council resolve to memorialise the Lords of the Treasury and the Commissioners of Public Works and Buildings, &c., to convert Queen Mary's bed-room in the Palace, or some other portion of the Palace of Linlithgow, into an antiquarian museum, more particularly for the collection and exhibition of local relics and articles of interest.

The Yarmouth Aquarium.—The works of the Yarmouth Aquarium have been recently much delayed, owing, according to a Norfolk paper, to the non-delivery of the ironwork, which, we regret to observe, is being manufactured in Belgium. As was recently noted in the *Builder*, the whole of the ironwork of the new Natural History Museum at South Kensington also comes from Belgium.

The Fever Huts at Woolwich.—The soldiers' huts on Woolwich-common, which were emptied of their tenants by an epidemic of fever which compelled the survivors to take flight, are now being demolished. Various efforts have been made to patch and repair them; but it was impossible to get rid of the damp and rot, and they are to be entirely swept away. Provision is made in the Army Estimates to spend 8,600*l.* in married soldiers' quarters this year.

Mr. George Smith, of Coalville.—We understand a movement is on foot among the working classes and others at Coalville to present Mr. George Smith with a purse to help him in his up-hill work of improving the condition of the women and children living and working on the inland canals. Mr. Smith's labours amongst brickyard *employés* are well known to many of our readers.

The Shakspeare Theatre.—Lord Leigh presided at a meeting in Leamington in furtherance of a National Memorial Theatre, Library, and Picture Gallery, to be erected at Stratford-on-Avon, in honour of Shakspeare. His lordship warmly eulogised the project. The estimated cost is 10,000*l.*, of which 4,000*l.* have been already subscribed. An association has been formed under the Limited Liability Act to carry out the scheme.

The King's Norton Surveyorship.—At a meeting of the King's Norton Rural Sanitary Authority, on the 8th inst., applications were received for the situation of surveyor and nuisance inspector to the Authority. Three candidates presented themselves, and, after they had been questioned, the Authority unanimously appointed Mr. Hubert R. Tipton, of the Borough Surveyor's Office, Birmingham, at a salary of 150*l.* per annum.

The Galashiels Masons.—The masons of Galashiels have demanded a rise of wages from 8*d.* to 8½*d.* per hour, which the employers have determinedly refused to grant, and there is every prospect of a strike. The workmen have given notice that if their demand is not complied with they will stop work, and masons are advertised to keep away from Galashiels during the dispute.

Hamburg Lutheran Chapel.—At the last meeting of the British Archæological Association Mr. Brock, F.S.A., read notes on the reredos of the Hamburg Lutheran Church, Little Trinity-lane, and now being re-erected at Dalston, said to be the work of Grinling Gibbons, and he exhibited some fine specimens of the carving described.

A Skating Rink for Carlisle.—The new skating-rink which has been for some time in course of formation at the Volunteer Drill-hall, Carlisle, was opened on Wednesday, the 15th inst. The works have been carried out by Messrs. D. Green & Sons, Bedford, at a cost not far short of 1,000*l.* The floor is 133 ft. by 52 ft.

New Cemetery, Taunton.—The tender of Mr. H. J. Spiller, of Bridge-street, Taunton, amounting to 2,325*l.*, has been accepted for erecting chapels, entrance-lodge, boundary-walls, &c., for the above cemetery, and the works are now in progress. Mr. J. Bevan, of Nicholas-street, Bristol, is the architect.

Competition.—In a limited competition for a proposed new church, Steelhouse-lane, Wolverhampton, the committee have selected the design submitted by Messrs. T. Taylor Smith & Geo. Freeth Roper. All the designs were previously submitted to Mr. Ewan Christian to report upon.

A New Vicarage for Ashted, Birmingham.—It is proposed to erect a new vicarage for the parish of St. James, Ashted, from plans prepared by Mr. Osborn, architect, Birmingham. The estimated cost is 3,000*l.*

Piece-work.—At the Social Science Association, on Monday evening next, the 20th inst., a paper by Mr. Frederic Hill, "On Piece-work as compared with Time-work," will be read and discussed.

Cemetery Chapels, Mortuary, and Lodge. The Wimbledon Local Board have selected the designs of Mr. Banister Fletcher out of the seventeen sets of designs submitted in public competition.

TENDERS

For the erection of a factory in Carnarvon-street, Nottingham (exclusive of ironwork). Messrs. Robert Clarke & Son, architects:—

Hodson & Facon	£3,706 0 0
Stevenson	3,618 0 0
Woolf	3,390 0 0
Jelley	3,350 0 0
Bradley & Barker	3,333 0 0
Clarke	3,305 0 0
Hind	3,185 0 0
Slim	3,182 10 0
Slight	3,173 0 0
Vickers (accepted)	3,111 0 0

For manufacturing premises, for Messrs. Hayward, Brothers, situated in Union-street, Borough, for the production of their new prismatic pavement lights:—

Gammon & Sons	£2,226 0 0
Braid & Co.	2,220 0 0
Downs & Co.	2,045 0 0
Shepherd	1,969 0 0
Rider & Son	1,968 0 0
Newman & Mann	1,915 0 0

For the erection of two houses at Kensington, for Mr. Thomas Thornycroft. Mr. Baker, architect:—

Jackson & Shaw	£9,375 0 0
Lascelles	7,707 0 0
Wagner	7,000 0 0
Adamson & Sons	5,885 0 0
Nash	5,840 0 0

For the erection of a house at Ealing, for Mr. Edwin James. Mr. T. Cooper, architect:—

Timewell	£2,359 0 0
Heath	2,287 0 0
Nye	2,150 0 0
Wagner	2,127 0 0
Adamson	2,088 0 0
Rhodes	1,981 0 0

For alterations to a warehouse, corner of Love-lane and Little Love-lane, City, for the Patent Woollen Cloth Company. Messrs. Ford & Hesketh, architects:—

Tongue	£2,861 10 0
Morter	2,815 0 0
Kirk & Randall	2,737 0 0
Brass	2,618 0 0
Killby	2,408 0 0
Lawrence	2,380 0 0
Adamson & Sons	2,376 12 0
Merritt & Ashby	2,326 0 0
Scrivener & White	2,284 0 0
Foster	2,253 0 0
Crabb (accepted)	2,125 0 0

For alterations and additions to the Half-way House publichouse, Fulham, for Mr. J. C. Bell. Mr. F. N. Kemp, architect:—

Dredge (accepted)	£205 5 0

For a warehouse and store on the premises of Mallett, Porter, & Dowd, Caledonian-road:—

Holding	£448 15 0
Cross	462 0 0
Grover	428 0 0
Linfield	398 0 0
Aitchison	397 0 0
Scowen	389 0 0
Kirk	331 0 0

For alterations and additions to 7, Cannon-place, Brighton. Mr. Thos. Simpson, architect:—

Patching & Webber	£416 0 0
Cheesman & Co.	398 0 0
Lockyer (accepted)	383 0 0

For house and shop, for Mr. Junor, North-street, Brighton. Mr. B. H. Nunn, architect:—

Newnham	£1,993 0 0
Patching & Webber	1,937 0 0
Barnes	1,878 0 0
Parsons	1,836 0 0
Howard	1,790 0 0
Lockyer	1,775 0 0
Bruton (accepted)	1,750 0 0

For public elementary school for infants, Boyces-street, Brighton, for the Brighton School Board. Mr. Thos. Simpson, architect:—

Steyning	£2,854 0 0
Chappell	2,800 0 0
Cheesman & Co.	2,750 0 0
Bruton	2,750 0 0
Bolling	2,640 0 0
Parsons	2,627 0 0
Barnes	2,584 0 0
Patching & Webber	2,579 0 0
Lockyer (accepted)	2,550 0 0

For alterations at the Earl Grey publichouse, Mile-end-road, for Mr. Thos. Jennings:—

Howard	£193 0 0
Harrison	176 0 0
Crisp	175 0 0
Ellis	157 0 0
Cocks (accepted)	138 0 0

Accepted for Board schools, for the United District of Beal, Birkin, and Kellington. Mr. William Watson, architect:—

Excavating, Bricklaying, Stonework, Plastering, and Slating.

Adams	£1,280 0 0

Carpenter, Joiner, Painter, and Stainer's Work.

Wright	321 0 0

Plumbing, Glazing, and Ironwork.

Tate	238 10 0

Accepted for enlarging business premises, at Doncaster, for Messrs. D. Roberts & Son. Mr. William Watson, architect:—

Arnold	£765 0 0

Accepted for a wooden drill-shed, 60 ft. by 45 ft., at Normanton, for the 5th West Yorkshire Rifle Volunteers. Mr. William Watson, architect:—

Denison	£234 0 0

For new cemetery church, for the Manor Park Cemetery Company. Mr. H. J. Jones, architect:—

Brass	£2,835 0 0
Staines & Son	2,383 0 0

For new railway station and offices, at Bexhill, for London, Brighton, and South Coast Railway Company. Mr. F. D. Banister, architect:—

Vidler (accepted)	£2,044 0 0

For asphalte footways, in Mayfair, for the Fulham Board of Works:—

Brunswick Co.	£465 0 0
Val de Travers Co.	401 10 0
Société Française des Asphaltes	395 0 0
Grindley & Co.	350 0 0

For the erection of four detached villas in Caufield-road, St. John's Wood. Mr. Banister Fletcher, architect:—

Dexter	£7,332 0 0
Aitchison & Walker	6,848 0 0
Prout	6,000 0 0

For the erection of a new wing to St. Mildred's, Barnet, for Mr. J. W. Billinghurst. Mr. Fras. L. Pither, architect:—

		Old Materials.
Axford	£410 0 0	£35
Kininmont & Son	354 10 0	Nett.
Temple & Foster	348 0 0	10
Miskin (accepted)	345 0 0	10

For the erection of two houses in the Second-avenue, Brighton, for Mr. W. A. Oakley. Mr. Waghorn, architect:—

	Design A.	Design B.
Cheesman & Co.	£3,050	£2,670
Nash & Co.	2,940	2,540
Bruton	2,850	2,450
Steyning	2,850	2,420
Collwell	2,785	2,389
Barns	2,670	2,345
Longley	2,370	1,890

For addition to St. John's, Putney-hill, for Mr. Geo. Allen. Mr. Sancton Wood, architect. No quantities:—

Stimpson	£820 0 0
Avies & Co.	786 0 0
Aries (accepted)	735 0 0

For the erection of stables, and living-rooms over, for Messrs. Nutter & Greenland, High-street, St. Giles's. Mr. F. Beeston, architect. Quantities by Mr. James Barnett:—

Kininmont	£2,167 17 0
Oliver	2,030 0 0
Bracher & Son	1,849 0 0
Aviss	1,820 0 0
Coleman	1,748 0 0
Smale	1,605 0 0

For villa residence, &c., at Brownswood Park, for Mr. J. Newton. Mr. John Viney, architect:—

Sutton (accepted)	£1,700 0 0

For general repairs at the Oxford Tavern, Kentish-town, for Mr. George Ayres. Mr. John Viney, architect:—

Cox	£144 19 6
MacIntosh	135 0 0
Knotts & Drane (accepted)	125 0 0

For new counters, pewtering, &c., at the Raglan Hotel, St. Martin's-le-Grand, for Mr. Thomas Young. Mr. John Viney, architect:—

Heath (accepted)	£209 0 0

TO CORRESPONDENTS.

J. P. M.—C. & Son.—H. P. & Sons.—J. P.—R. M. Y.—C. S.—M. L.—R. T.—Mr. E.—W. G. D.—G. M.—H. G.—T. L.—E. S.—W. H. W.—H. St. J.—C. B. E. C.—W. B.—W. D.—F.—W. W.—G. F. K.—A. S.—J. K. C.—Messrs. D.—J. H.—F. L. P.—W. T.—M. P.—A. P.—S. M. M.—C. B. (the duties required vary. What these duties ought to be have been pointed out in our pages, but we cannot refer).—Reader (correspondents who start by saying they very seldom see the *Builder*, and request us to point out to them in what numbers they will find certain articles, must be very silly people).—P. W. Y. (next week).—G. M. (next week).—Armiger (in type).

We are compelled to decline pointing out books and giving addresses.

All statements of facts, lists of tenders, &c. must be accompanied by the name and address of the sender, not necessarily for publication.

NOTE.—The responsibility of signed articles, and papers read at public meetings, rests, of course, with the authors.

Advertisements cannot be received for the current week's issue later than **THREE** *o'clock p.m. on THURSDAY.*

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